

University of Montana

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### 2021-2022 Course Catalog

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## 2021-22 Academic Catalog

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Creative Pulse (CP)	1936
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Culinary Arts (CULA)	1944
Curriculum and Instruction (C&I)	1948
Dance (DANC)	1950
Diesel Service Tech (DST)	1957
Drafting Design (DDSN) < University of Montana	1959
Drafting Design (DDSN)	1959
Early Childhood Education (EDEC)	1961
Earth Systems (ERTH) < University of Montana	1964
Earth Systems (ERTH)	1964
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Education K-12: Library Media (LIBM)	1970
Education K-12: Special Edu (EDSP)	1971
Education-K-12 (EDU)	1973
Educational Leadership (EDLD)	1987
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Electronics Technology (ETEC)	1995
Emergency Care Provider (ECP)	1998
English - English Teaching (ENT)	2003
English - Literature (LIT)	2006
English Language Institute (ELI) < University of Montana	2013
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# Academic Policies and Procedures

## Registration and Course Information

### Academic Calendar

The Academic Calendar for the current academic year, as well as past and future years, may be found on the Academic Calendar web page.

### Registration for Courses

Students who have no prior attendance at the University must apply for admission and be admitted before being eligible to register for courses. See the Admissions section of this catalog or the admissions website.

Detailed instructions regarding registration and course offerings are available on the Registrar web pages for registration information and course schedule information.

Students must complete course registration during the scheduled registration period or be subject to payment of a late registration fee, if allowed to register. Registration is not complete nor is any academic credit awarded until all course tuition and fees for the semester have been paid.

### Adding, Dropping and Other Course Changes

#### Adding, Dropping and Other Course Changes Summary Tables

Students must clear all registration holds before registering for classes. The following information does NOT apply to the School of Law. Law school students should see the School of Law website for information.

#### Autumn & Spring Semesters

##### Add/Drop Dates

<b>INSTRUCTIONAL DAYS</b>	<b>DAY 1-7</b>	<b>DAY 8-15</b>	<b>DAY 16-45</b>	<b>DAY 46-LAST REGULAR CLASS DAY</b>	<b>AFTER LAST REGULAR CLASS DAY</b>
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Add a Course	Registration --> Register for Classes	Electronic Override from instructor --> Registration --> Register for Classes	Course Add/Change/Drop link --> instructor and advisor* approval	Course Add/Change/Drop link --> instructor and advisor* approval	Only registration errors can be corrected; see Registrar's Office
Change a Section	Registration --> Register for Classes	Electronic Override from instructor then --> Registration --> Register for Classes to finish add & drop	Course Add/Change/Drop link --> both instructors' approvals	Course Add/Change/Drop link --> both instructors' approvals	Only registration errors can be corrected; see Registrar's Office
Drop a Course	Registration --> Register for Classes	Registration --> Register for Classes	Course Add/Change/Drop link --> instructor and advisor* approvals; W on transcript	Course Add/Change/Drop link --> instructor, advisor*, and Dean's approvals; WP or WF on transcript	Not permitted
Change to/from Audit	Registration --> Register for Classes	Registration --> Register for Classes	Not permitted	Not permitted	Not permitted



Change to/from CR/NCR grading, or change credits (for variable credit courses)	Registration --> Register for Classes	Registration --> Register for Classes	Course Add/Change/Drop link --> instructor and advisor* approvals	Course Add/Change/Drop link --> instructor and advisor* approvals	Only registration errors can be corrected; see Registrar's Office
*Not required for Graduate & Post-Baccalaureate students					

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Summer Semester: 5-week Sessions

Add/Drop Dates - Summer Semester 5 week Sessions

<b>INSTRUCTIONAL DAYS</b>	<b>DAY 1-2</b>	<b>DAY 3-5</b>	<b>DAY 6-14</b>	<b>DAY 15-23</b>	<b>DAY 24 &amp; BEYOND</b>
Add a Course	CyberBear	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Only registration errors can be corrected; use the Summer Override & Add/Drop Form with instructor signature
Change a Section	CyberBear	Summer Override & Add/Drop Form with both instructors signatures	Summer Override & Add/Drop Form with both instructors signatures	Summer Override & Add/Drop Form with both instructors signatures	Only registration errors can be corrected; use the Summer Override & Add/Drop Form with both instructors signatures

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Drop a Course	CyberBear	CyberBear	Summer Override & Add/Drop Form with instructor signature (W on transcript)	Summer Override & Add/Drop Form with instructor and Dean s signature (WP or WF on transcript)	Not permitted
Change to/from Audit	CyberBear	CyberBear	Not permitted	Not permitted	Not permitted
Change to/from CR/NCR grading, or change credits (for variable credit courses)	CyberBear	CyberBear	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Not permitted

Summer Semester: 10-week Session

Add/Drop Dates - Summer Semester 10 week Sessions

<b>INSTRUCTIONAL DAYS</b>	<b>DAY 1-5</b>	<b>DAY 6-10</b>	<b>DAY 11-29</b>	<b>DAY 30-47</b>	<b>DAY 48 &amp; BEYOND</b>
Add a Course	CyberBear	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Only errors can be corrected; use the Summer Override & Add/Drop Form with instructor signature
Change a Section	CyberBear	Summer Override & Add/Drop Form with both instructors signatures	Summer Override & Add/Drop Form with both instructors signatures	Summer Override & Add/Drop Form with both instructors signatures	Only errors can be corrected; use the Summer Override & Add/Drop Form with both instructors signatures
Drop a Course	CyberBear	CyberBear	Summer Override & Add/Drop Form with instructor signature (W on transcript)	Summer Override & Add/Drop Form with instructor and Dean's signature (WP or WF on transcript)	Not permitted
Change to/from Audit	CyberBear	CyberBear	Not permitted	Not permitted	Not permitted
Change to/from CR/NCR grading, or change credits (for variable credit courses)	CyberBear	CyberBear	Summer Override & Add/Drop Form with instructor signature	Summer Override & Add/Drop Form with instructor signature	Not permitted

Special Sessions

Special Session courses, offered during any term, will vary from the sessions listed above. For example, a course taught over a period of five weeks is considered a special session course if its start and end dates are different than the published regular term dates. Please check with the Registrar's Office for specific dates

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related to changing registration in a special session course.

### **Adding, Dropping and Other Course Changes Detailed Information**

All guidelines and timelines that follow refer to the traditional autumn and spring semesters, which are generally 74-75 days in length. The timelines that apply to Summer Sessions and Winter Session are detailed in the tables above. Important Dates are listed on the Registrar's Office calendar web page. Please see the Business Services/Student Accounts website for information regarding how fees are impacted by dropping/adding courses, as well as the refund schedule for a complete withdrawal from the University of Montana.

#### Adding, Dropping or Other Course Changes First Through Seventh (1-7) Instructional Day of the Semester

During this time frame, students may use CyberBear to add courses, drop courses, change grading options, and/or change variable credits. Access to CyberBear for adding courses or changing sections ends at 5:00 p.m. Mountain Time on the seventh day of classes.

#### Adding, Dropping or Other Course Changes Eighth Through Fifteenth (8-15) Instructional Day of the Semester

During this time frame, with consent of the course instructor, students may add courses or change sections with an instructor-approved electronic override (via CyberBear). Fees are reassessed each night during this time period. Added courses and credits may result in additional fees.

Students may drop courses, change grading option (including audit), and/or change variable credits via CyberBear until 5:00 p.m. Mountain Time on the fifteenth day.

#### Adding, Dropping or Other Course Changes Sixteenth Through Forty-fifth (16-45) Instructional Day of the Semester

During this time frame, students must use the Course Add/Change/Drop link to collect permissions from both the course instructor and student's advisor to:

1. drop or add a course
2. perform changes to section, grading option, or variable credit loads

The ability to change to or from audit is no longer available at this time.

A \$10.00 processing fee is charged for each drop or add. Added courses and credits may result in additional fees. There are no refunds or reductions of fees for courses dropped after the 15th day (or equivalent).

Approved course drop requests must be received by the Registrar's Office no later than close of business on the forty-fifth instructional day of a semester. A grade of W (withdrawn) is recorded for each dropped course.

#### Adding, Dropping, or Other Course Changes Forty-sixth (46) Instructional Day of the Semester Through the Last Regular Class Day

##### **Adds & Changes:**

During this time frame, students must use the Course Add/Change/Drop link to collect permissions from both the course instructor and student's advisor to add a course, change the grade option, or change variable credits.

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Changing to or from audit is not permitted during this time.

Not all requests for adds, changing grade options, or changing variable credits are approved. Advisors have the right to indicate they do not recommend approval of the request. However, it is the course instructor's decision to approve or deny the request to add/change a course.

Approved course add and course change requests must be received by the Registrar's Office no later than close of business on the Last Day of Regular Classes. A \$10.00 processing fee is charged for each course add. Added courses and credits may result in additional fees.

### **Drops:**

During this time frame, students may drop courses only by petition. Students must use the Course Add/Change/Drop link to collect permissions from the course instructor, student's advisor, and Dean of the student's major.

Note that not all petitions are approved, and that documented justification is required. Some examples of documented circumstances that may merit approval are: accident or illness, family emergency, or other circumstances beyond the student's control. Instructors and advisors have the right to indicate they do not recommend the drop. However, it is the decision of the Dean of the student's major to approve or deny the request to drop courses.

Approved course drop requests must be received by the Registrar's Office no later than close of business on the Last Regular Class Day. A \$10.00 processing fee is charged for each drop. There are no refunds or reductions of fees for courses dropped, and the instructor assigns a grade of WP (withdrawn/passing) if a student's course work has been passing or WF (withdrawn/failing) if failing. These grades do not affect grade averages but they are recorded on a student's transcript.

The opportunity to drop a course for the current term ends on the last day of instruction before scheduled final exams. Dropping a course taken in a previous term or altering grading option or audit status for such a course is not allowed. The only exceptions are for students who have received a grade of NF (never attended/fail).

Law School students - see the School of Law website add and drop deadlines for law courses.

## **Cancellation of Courses**

The University reserves the right to cancel any course.

## **Common Course Numbering - Montana University System**

All universities, 4-year and 2-year colleges that are part of the Montana University System are now required to use the same course numbering for undergraduate courses. With common course numbering, transfer students can be reassured that they will receive credit for undergraduate courses taken at another Montana institution, as long as the admitting institution offers that same course. This transparency will make it easier for students to continue their higher education at any state-supported campus.

Effective Autumn Semester 2009, all units of the Montana University System (MUS) began to offer classes using new subject abbreviations and new numbers that are common across all MUS units. Subject areas and numbers continue to be renumbered as of the publication of this catalog. Information regarding Common

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Course Numbering at the University of Montana is available at the Common Course Numbering web page.

### Withdrawal from the University

Students who withdraw from the University (withdrawing from ALL classes) while a semester is in progress must complete withdrawal forms which are obtained from a withdrawal coordinator. Drop/add forms cannot be used to withdraw from school. Students are not allowed to drop all their courses on CyberBear. International students must first contact a coordinator in the Global Engagement Office before withdrawing as visa status will be affected.

See the withdrawal website for more information.

If a student receiving financial aid withdraws they may have to repay aid received in the current semester and it may affect eligibility in the future semesters. If a student stops attending classes without formally withdrawing they too may have to repay aid received in the current semester and may be ineligible for aid in future terms.

Students who reside in a University residence hall, University Villages, or Lewis & Clark Villages must notify the proper officials in the UM Housing Office of the withdrawal.

Students who purchase health insurance with registration will receive a refund and lose coverage if withdrawn during the first fifteen instructional days unless a student is granted a withdrawal for medical reasons. Withdrawal after the fifteenth day will not result in a refund but coverage will continue through the remainder of the semester.

Completed Semester Withdrawal Forms must be submitted to the Withdrawal Coordinator by the last regular class day. The form is then processed by the Registrar's Office. No record of registration will appear on the transcript if withdrawn within the first 15 instructional days (or equivalent for irregular sessions). From instructional day 16 through the last regular class day, W's will be recorded for all registered courses. After the last regular class day, students may not withdraw from the University except for very unusual circumstances as described below.

#### **Retroactive Semester Withdrawals**

In exceptional cases, a student may appeal for a retroactive semester withdrawal for a previous semester in attendance. All such appeals are reviewed by a committee. Approval of a retroactive semester withdrawal does not change a student's academic standing. Forms and instructions are located on the Registrar's web page.

#### **Hardship Petition**

In the case of extreme medical, family, or other emergencies that are documented and have impacted a student's ability to attend and succeed in courses, a student may appeal for a hardship petition from the University. Such appeals are reviewed by a committee and are considered on a case by case basis. To apply for a hardship petition contact Student Accounts at 406-243-2223.

### Prerequisites and Co-requisites

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"Prerequisite" indicates that the course(s) or requirement(s) described must have been met/satisfactorily completed (grade of C- or better, unless otherwise specified in the course description in the catalog) before the student may take the course that requires the listed prerequisite. Failure to complete satisfactorily the prerequisite will result in the student being dropped from the course which requires the prerequisite. If credit for a prerequisite was earned via the Advanced Placement (AP) Examination Program, the AP score is recorded on a student's academic record with a grade of "CR\*" (prior to Autumn Semester 2012), or a score of AP3, AP4, or AP5 (Autumn Semester 2012 and thereafter).

"Co-requisite" indicates the course or courses must be taken concurrently (in the same academic term) with the course described. In some cases a co-requisite may be completed prior to the semester in which the course that requires the co-requisite is taken.

### Course Numbering System

- 001-099 Courses below college level. Credit not allowed toward a degree.
- 100-199 Primarily for freshmen.
- 200-299 Primarily for sophomores.
- 300-399 Primarily for juniors.
- 400-499 Primarily for seniors.
- 500-699 Primarily for graduate students.
- Senior (5th year) courses in Pharmacy are numbered 500 to 599.

### Undergraduates in Graduate Courses

Post-baccalaureates and seniors holding a 3.0 (or greater) grade point average may, with consent of instructor, enroll in 500-level courses for undergraduate credit. Variance from these requirements cannot be petitioned.

### Equivalent Courses

In certain cases, a course description indicates credit is not allowed for a particular course and for another course offered by a different department. These courses are very similar in content, although offered separately, and credit is not allowed toward a degree for both courses.

### Full-Time Student Defined

In most baccalaureate programs a student must earn at least 15 credits per semester to graduate in a four year period. One and two year programs usually require enrollment in between 15 and 19 credits per semester.

#### Undergraduate Students

- Full Time: 12 or more enrolled credits
- 1/2 Time: 6-11 enrolled credits

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- <1/2 Time: 5 or fewer enrolled credits
- Not Enrolled: 0 enrolled credits (withdrawn/graduated, etc.)

### Graduate Students

- Full Time: 9 or more enrolled credits
- 1/2 Time: 6-8 enrolled credits
- <1/2 Time: 5 or fewer enrolled credits.
- Not enrolled: 0 enrolled credits (withdrawn/graduated, etc.)

### **PSYX 638 & PSYX 588**

One credit of PSYX 638 per semester is equivalent to full-time enrollment for students in the Clinical Psychology PhD Program.

One credit of PSYX 588 per semester is equivalent to full-time enrollment for students in the School Psychology PhD Program.

## Maximum Credit Load

Generally, an undergraduate student should register for no more than 21 credits during a semester. The credit load would include physical education activity courses, and also remedial courses (those numbered below 100), credits from which do not count toward a certificate or degree.

Permission to enroll for more than the maximum credit load given above may be approved by the student's academic advisor.

## Final Examinations

Final examinations for the semester are scheduled in two-hour segments, one for each course. The segments should be considered as class meetings to be treated by the instructor as he or she thinks educationally appropriate. The time scheduled for final examinations is the only time period during which final examinations are to be given. If an instructor elects not to give a final examination during the designated week, under no circumstances are final examinations to be given during the week preceding the scheduled final examination days.

Students may seek relief from writing more than two examinations during the same day. Students who are scheduled for more than two examinations may contact the appropriate faculty to arrange an alternate testing time during the scheduled final examination period. If satisfactory arrangements cannot be made, the student should seek the assistance of his or her dean.

## University Employee Registration

University employees who have applied and have been accepted for admission to the University may register with the approval of the employee's supervisor. Waivers of some tuition may be granted to qualifying faculty and staff members who are at least three-quarter-time salaried employees on the date of registration. Additional information and the necessary forms are available in the Office of Human Resource Services.



## Grading and Academic Standing Information

### Grading System

The University uses two types of grading: traditional letter grades and credit/ no credit grades. At the option of the instructor, some courses are offered only on the traditional letter grade basis or only on the credit/no credit basis. Other courses are open to either type of grading, at the option of the student. Courses offered on the A - F basis only or CR/NCR only will be indicated in the Course Search under Class Details.

The instructor has the first fifteen (15) class days of the semester to change the grading option for their course. If a change does occur from the original published grading option, the students in the class and the Registrar's office must be notified of the change not later than the fifteenth (15) class day.

#### Traditional Letter Grading (A-F)

Traditional Letter Grades represent an assessment of the overall quality of work performed in a given course.

- A =Excellent;
- B = Good;
- C = Satisfactory;
- D = Poor;
- F = Failure

When assigning traditional letter grades, instructors may, at their discretion, utilize the symbols + or -. Use of the + or - will be limited to A-, B+, B-, C+, C-, D+, and D-.

Grades preceded by an R indicate remedial courses. Remedial courses do not count in credits earned, nor in grade point averages, nor do they count toward graduation.

Grades preceded by an E indicate academic forgiveness was granted.

Other grade symbols used are:

- I = Incomplete;
- N = work on the course may be continued in later semesters. When work is completed, the final grade assigned applies to all semesters of the course;
- NF = no record of academic performance/failing;
- W = withdrawal from a course or course dropped after the fifteenth instructional day;
- WP = course dropped after the forty-fifth instructional day with passing work;
- WF = course dropped after the forty-fifth instructional day with failing work;
- AUD = auditor registration.

#### Course Audit

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A grade of AUD is recorded for all students who register in courses as auditors, intending to listen to the courses without earning credit or being graded. Audited courses do not impact a student's grade point average. The same fees are assessed as when registering for credit.

Any attendance or participation expectations are established by the instructor of the course. If attendance expectations are not met, the instructor may request a notation be placed on the student's academic record indicating attendance was not satisfactory.

### **Credit/No Credit Grading (CR/NCR)**

Student Option: To encourage students to venture into courses where they might otherwise hesitate because of uncertainty regarding their aptitude or preparation, they may enroll in some courses on a credit/no credit basis. Freshmen and sophomores are discouraged from taking more than one course a semester on a credit/no credit basis.

No more than 18 CR credits may be counted toward graduation requirements at the baccalaureate level. Courses taken to satisfy General Education Requirements must be taken for traditional letter grade. Courses required for the student's major or minor must be taken for traditional letter grade.

A grade of CR is assigned for work deserving credit (A through D-) and a grade of NCR is assigned for work of failing quality (F). CR and NCR grades do not affect grade point averages. The grades of CR and NCR are not defined in terms of their relationship to traditional grades for graduate course work.

Election of the credit/no credit option must be indicated upon registration or within the first 15 class days on CyberBear. Between the 16th day and the last day of instruction before finals week, a student may request a change from credit/no credit enrollment to an enrollment under the A-F grade system, or the reverse, by means of a Course Add/Change/Drop request. Please note that not all such requests are approved. See instructions above.

The University cautions students that many graduate and professional schools and some employers do not recognize non-traditional grades (i.e., those other than A through F) or may discriminate against students who use the credit/no credit option for many courses. Moreover, students are cautioned that some degree programs may have different requirements regarding CR/NCR credits, as stipulated in the catalog.

### **No Credit Grading in Composition (NC)**

Students enrolled in WRIT 095 and WRIT 101 are graded by the traditional letter grades of A through F or are given NC for no credit. The NC grade is awarded when exceptional progress has occurred but the student needs to repeat the course. The NC grade does not affect grade point average.

### **COVID - 19 Provisional Grading for the Spring 2020 Semester**

In light of the challenging remote instructional environment caused by the COVID-19 pandemic, and in order to moderate student stress while adapting to a new system of course delivery, the University of Montana implemented an alternative grading mechanism effective during the spring semester of 2020. Specific grading information for this provision can be found on the COVID - 19 grading page.

## **Incomplete Grade Policy**

It is assumed that students have the responsibility for completing the requirements of the courses in which they are enrolled within the time framework of the semester.

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A grade of Incomplete (I) may be given when, in the opinion of the instructor, there is a reasonable probability that students can complete the course without retaking it. If an Incomplete is granted, the student should not re-register for the course as that is considered a course repeat.

The incomplete is not an option to be exercised at the discretion of a student. In all cases it is given at the discretion of the instructor within the following guidelines:

1. A mark of incomplete may be assigned students when:
  - The student has regularly attended and completed passing work for most of the semester, and
  - For reasons beyond the student's control and which are acceptable to the instructor, the student has been unable to complete the requirements of the course on time. Negligence and indifference are not acceptable reasons.
2. The instructor sets the conditions for the completion of the course work, and communicates them to the departmental office.
3. When a student has met the conditions for making up the incomplete, the instructor will assign a grade based upon an evaluation of the total work done by the student in the course.
4. An incomplete which is not made up within one calendar year automatically will revert to the alternate grade which was assigned by the instructor at the time the incomplete was submitted.
5. An incomplete remains on the permanent record and is accompanied by the final grade, for example, IA, IB, IC, etc.

## Faculty Options for Grading Mode

- A faculty member may elect to grade an entire class using the traditional letter grading option (A-F).
- A faculty member may elect to grade an entire class using the credit/no credit option (CR/NCR). This method of grading is used in courses where more precise grading is inappropriate.
- A faculty member may elect to grade an entire class with the open grade mode option which allows students to choose between traditional letter grading and credit/no credit grading. When a course is offered with the open grade mode option, then the default grading at the time of registration defaults to traditional letter grading. It is the student's responsibility to make the change to credit/no credit grading if this is their preference.
- Faculty members must choose the grade mode option for their courses at the time when courses are being proposed for a particular semester or within the first 15 instructional days of the semester.
- For the Spring semester of 2021 only, a faculty member may elect to add the open grading mode up until the 45th instructional day.
- Courses graded credit/no credit only and courses graded A-F only will be identified in the Course Search under Class Details.

## Credit Definition

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Credit is defined in terms of semester hours. In general, 1 semester hour credit is allowed for 1 hour of lecture each week of the semester, or an average of 2 hours of laboratory each week of the semester.

In determining semester hour recommendations, evaluators use the following guidelines:

1. One semester credit hour for each 15 hours of classroom contact plus 30 hours of outside preparation or the equivalent; or
2. One semester credit hour for each 30 hours of laboratory work plus necessary outside preparation or its equivalent, normally expected to be 15 hours; or
3. One semester credit hour for not less than 45 hours of shop instruction (contact hours) or the equivalent.

## Computation Of Cumulative Grade Point Average

Quality points are assigned as follows:

- 4 quality points for each credit of A;
- 3.7 quality points for each credit of A-;
- 3.3 quality points for each credit of B+;
- 3 quality points for each credit of B;
- 2.7 quality points for each credit of B-;
- 2.3 quality points for each credit of C+;
- 2 quality points for each credit of C;
- 1.7 quality points for each credit of C-;
- 1.3 quality points for each credit of D+;
- 1 quality point for each credit of D; and
- 0.7 quality points for each credit of D-.

The cumulative grade average is computed by dividing the total quality points earned by the total number of credits attempted, excluding courses assigned W, WF, WP, CR, NC, NCR, I, AUD, or N grades and courses numbered under 100 (grade is preceded by an R).

For repeated courses, excluding courses assigned W, WF, WP, NC, NCR, I, AUD, or N grades, only the last grade earned will count toward the cumulative grade average.

Grades for courses transferred from other colleges and universities are not included in the calculation of the grade point average.

## Repeating a Course

The repeat fee is covered when a student pays the \$25.00 student support fee.

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Initial grades will be marked as repeated and remain on the transcript, but they will not be used in the GPA calculation. Grades of AUD, I, N, NC, NCR, NP, NF, W, WP, or WF may not be used to replace grades. An F grade will be used to replace grades. If the last grade received is an F, no credit is given for previous passing grades. All courses repeated remain on the permanent record but only the last grade received is used to determine credits earned. Only the last grade received is used in calculating the grade point average.

If students receiving federal financial aid repeat a course previously passed they can only receive financial aid to do so a second time. On a third attempt the course will not be counted in the enrollment status for determining aid eligibility.

If enrollment in a course is closed, a student who is repeating or auditing the course may be required by the instructor to drop the course. This rule grants enrollment preference to those students attempting to register for the course for the first time for credit. It is the responsibility of the student who is not allowed to remain in the course to formally drop the course to avoid a failing grade for that course.

Repeating a course in the School of Law is governed by a different policy. Law School students - see the School of Law website for course repeat information.

### Credit By Examination

Under certain circumstances, a currently registered student may receive credit by examination for a course in which he or she has not been regularly enrolled. The student must have a minimum cumulative grade average of 2.00 and an entering freshman must present a high school scholastic record equivalent to a 2.00 grade average to be eligible to earn credit by examination in any course.

Each school or department may determine those courses, if any, for which credit may be earned by examination. The Dean of the school or the Chair of the department must approve any arrangements prior to testing for such credit. On the successful completion of an examination, credits earned will be entered into the "Transfer Credit" portion of the student's transcript and will not count toward the credit load for the current semester. There are no fees for this type of credit by examination and grading may be credit/no credit or traditional letter grade.

### Undergraduate Academic Performance

The cumulative grade average is calculated by dividing the total quality points earned by the total number of credits attempted, excluding courses assigned W, WF, WP, CR, NC, NCR, I, AUD, or N grades and courses numbered under 100 (grade is preceded by an R). Grades for courses transferred from other colleges and universities are not included in the calculation of the grade point average.

### Dean's List (Honor Roll)

To qualify for the Dean's List, students must be undergraduates, must earn a semester grade average of 3.50 or higher, and receive grades of A or B in at least 9 credits. No grades of C+, C, C-, D+, D, D-, F, NC or NCR are allowed.

### 4.0 President's List

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To qualify for the 4.0 President's List, students must be undergraduates, must earn a semester grade average of 4.0, and receive a grade of A in at least 9 credits. No grades of NC or NCR are allowed.

### Undergraduate Academic Probation

An undergraduate student will be placed on academic probation if at the end of any semester his/her cumulative grade average drops below 2.00. The effect of the academic probation is to serve notice to the student that the quality of his/her work is below an acceptable level and that continuation of unsatisfactory work during their next semester of enrollment will result in academic suspension. Academic probation status is recorded on the student's academic transcript and semester grades. Students placed on probation should contact their academic advisor immediately to seek assistance and direction.

### Undergraduate Academic Suspension

An undergraduate student will be placed on academic suspension at the end of any semester if the student was on academic probation during his/her prior semester of attendance and the student's cumulative grade average remains below 2.00.

Exceptions are made if the student earns at least a 2.00 grade average for the current semester without raising the cumulative grade average to the required minimum. In such cases, students remain on academic probation.

A student placed on academic suspension may not re enroll at the University unless the student has been academically reinstated. Reinstatement will require, at minimum, one full semester of non-enrollment at any campus of the Montana University System. Academic suspensions are noted on final grades and academic transcripts. Additional information can be found on the Office for Student Success Academic Standing web page.

### Reinstatement from Academic Suspension

As noted above, an undergraduate student will be academically suspended at the end of a semester if placed on academic probation during the previous semester of attendance and the student's cumulative graduate point average (CGPA) remains below the 2.00 CGPA required for good academic standing.

Students who have been suspended for academic reasons and seek reinstatement must receive the approval of the academic dean of the school or college in which they intend to enroll. If seeking reinstatement in the Missoula College, contact the Retention and Advising Coordinator at MC.

Typically, retroactive grade changes, dropped courses or withdrawals do not reverse the academic suspension status that is recorded on the transcript, unless there was an error or grading mistake.

Academic reinstatement is not automatic. The student must provide the reasons for previous poor academic performance along with a carefully prepared plan for improvement that is completed with the help of an academic advisor. A student denied reinstatement may appeal the denial in writing to the President of the University within ten days of receiving the notice of denial. The decision to deny reinstatement normally will not be reversed unless there is evidence the decision was made arbitrarily.

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If a suspended and reinstated student has not attended UM for more than two years, the student must also complete an application for readmission through the Undergraduate Admissions Office. The readmission form re-activates the student's record and, along with the reinstatement form, allows the student to register for courses.

### Appeal of Academic Suspension

Students may appeal a suspension in cases where there are compelling and documented circumstances. If the appeal is approved by the dean of the student's college, the student may return to the university without sitting out a semester. Appeals are considered where the student has otherwise demonstrated an ability to succeed at the university and the compelling circumstances that led to the poor performance have been resolved.

An appeal of academic suspension will only be granted one time, on the approval of the appropriate dean. See the Appeal of Suspension Form, which details eligibility criteria and appropriate procedures.

### Academic Forgiveness

- A University of Montana-Missoula or Missoula College undergraduate, seeking their first undergraduate degree, who returns to the university after a minimum absence of three years and completes 30 credits of academic study with a minimum cumulative GPA of 2.5 is eligible for Academic Forgiveness.
- Academic Forgiveness allows a student who has met the requirements above to select a prior semester or semesters they wish to have excluded from calculation in the cumulative GPA. The semester(s) chosen must have occurred prior to the student's return to the university.
- Receiving Academic Forgiveness for a semester or semesters results in all credits and grades earned in the semester to be excluded from the student's GPA calculation. A student will not be allowed to select specific grades and credits to retain while excluding others earned within the same semester. The excluded courses and grades will remain on the transcript; however, they may not be used to fulfill any university requirements.
- Only University of Montana-Missoula or Missoula College grades and credits will be excluded.
- All excluded courses are still counted as attempted courses in determining if a student is meeting the pace standard of the financial aid satisfactory academic progress (SAP) policy. If the terms being forgiven include courses a student previously passed the result could be that the student would now be out of compliance with the SAP policy and would have to do a financial aid appeal to have aid eligibility reinstated.
- A student will be granted Academic Forgiveness only one time.
- Students who receive Academic Forgiveness will be bound by the University Catalog in effect at the time of their return to The University or any subsequent catalog in accordance with University policy.
- Students wishing to apply for Academic Forgiveness will contact the Registrar's Office for the appropriate form. The Registrar's Office will be responsible for verifying eligibility and notifying the student of approval.

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- Other options exist for students who have not left the university, such as course repeat, withdrawals, and other mechanisms listed under academic policies in this catalog.

Students wishing to apply for Academic Forgiveness may obtain the form on the Registrar's website at: Academic Forgiveness web page.

### Transcript of Academic Record

An official transcript of a student's academic record may be obtained via secure online ordering through the National Student Clearinghouse or from the Registrar's Office in the Lommasson Center upon the written and signed request of the student. In compliance with federal and state laws designed to protect student privacy, transcripts are not released without the student's authorizing signature. Copies ordered via National Student Clearinghouse can be delivered electronically, hard copy or direct electronic data exchange

Transcripts are usually available within two to five working days after receipt of the signed request. There is a charge for each official transcript. Payment must be received before transcripts are released. Transcripts and other services are withheld if the student owes a debt to the University. Special handling requests require extra fees.

Additional information regarding ordering options and fees may be viewed via the Registrar's Website.

Any student who enrolled after summer semester 1991 may view their academic record in CyberBear.

## Student Rights and Responsibilities

### Privacy and Release of Student Education Records (FERPA)

#### What is FERPA?

FERPA (Family Educational Rights and Privacy Act) was enacted in 1974. It is a set of regulations that applies to those institutions, such as the University of Montana, that receive funding from the Department of Education.

FERPA was written specifically for students and guarantees them the right to inspect and review their education records, the right to seek to amend education records, and the right to have some control over the disclosure of information from those **education records**.

#### Education Records

Under FERPA, education records are defined as records that are directly related to a student and are maintained by an education agency or institution or by a party acting for the agency or institution. Education records can exist in any medium, including: typed, computer generated, videotape, audiotape, film, microfilm, microfiche and email, among others.

#### Education records DO NOT INCLUDE such things as:

- Sole possession records such as records or notes in sole possession of the maker, used only as a personal memory aid and not revealed or accessible to any other person except a temporary substitute for the maker of the record. (This might include notes an instructor makes while providing career or professional guidance to a student.)



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- Medical treatment records that include but are not limited to records maintained by physicians, psychiatrists and psychologists.
- Employment records when employment is not contingent on being a student, provided the record is used only in relation to the individual's employment.
- Records created and maintained by a law enforcement unit used only for only that purpose and revealed only to law enforcement agencies of the same jurisdiction, as long as the enforcement unit does not have access to education records.
- Post-attendance records such as information about a person obtained when the person was no longer a student (e.g., alumni records) and does not relate to the person as a student.

## Resources for Students

### Notification Regarding Release of Student Directory Information

The Family Educational Rights and Privacy Act (FERPA) of 1974 (20 U.S.C. § 1232g; 34 CFR Part 99) is a federal law that protects the privacy of student education records. "Education records" are "those records, files documents, and other materials which 1) contain information directly related to a student; and 2) are maintained by an educational institution. (20 U.S.C. § 1232g(a)(4)(A); 34 CFR § 99.3). FERPA applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

Generally speaking, FERPA allows the University to disclose education records or personally identifiable information from education records in the following circumstances: with the written consent of the student, if the disclosure meets one of the regulatory exemptions, or if the disclosure is directory information and the student has not placed a hold on release of directory information.

The University defines the following information as directory information:

- Student's name
- Address (mailing, permanent and email)
- Telephone number
- Dates of attendance
- Degrees and honors received
- Major and minor field(s) of studies
- Class
- Participation in officially recognized activities and sports
- Most recent previous educational agency or institution attended by the student
- Weight and height, if student is a member of an intercollegiate athletic team

FERPA allows the University to release a student's directory information to anyone unless the student formally requests confidentiality by completing a form from the University Office of the Registrar.

### NO to Release of Directory Information

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If you do not wish to authorize the release of directory information and do not want your directory information to appear in the University Student Directory, you must inform the Office of the Registrar of this by completing a *Request to Restrict Directory Information form* which can be obtained from the Registrar's Office Website. You should allow at least three business days for processing.

### **You should be aware...**

You should be aware that restricting the release of your directory information has other consequences. For instance, a FERPA restriction makes it difficult or impossible for potential employers to verify your enrollment, or to verify the fact that you have earned a degree from the University. The University cannot notify your home town paper about awards and honors you receive (e.g., Dean's list). For this reason alone, many students choose to remove their FERPA restriction.

### **Change from NO to YES**

At any time after restricting the release of your directory information, you may change your mind and choose to authorize the University to release directory information and for it to appear in the University Student Directory. You can grant such authorization at any time by going to the Registrar's Office at 201 Lommasson with a valid photo identification or by completing a *Request to Rescind Restriction Directory Information form* which can be obtained from the Registrar's Office Website.

## **Notification of Students' Rights Under FERPA**

FERPA also affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access.

To inspect and review his or her education records, a student should submit to the registrar, dean, head of the academic department, or other appropriate University official or office having custody of the particular record(s), a written request that identifies the record(s) the student wishes to inspect. The school official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA. (*This process cannot be used to challenge a grade.*)

A student who wishes to ask the University to amend a record should write the appropriate University dean or director responsible for custody of the record, clearly identify the part of the record the student wants changed and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the University discloses personally identifiable information from the student's education records, except that the University may disclose the following information without a student's consent:

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- a. Disclosure to **school officials** with **legitimate educational interests**. A **school official** is a person employed by the University in an administrative, supervisory, academic, research, or support staff position (including, but not limited to University Police Department personnel, and Curry Health staff). A school official has a **legitimate educational interest** if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University.
- b. A contractor, consultant, or other outside service provider retained to provide various institutional services and functions under contract or by statute instead of using University employees or officials (including, but not limited to an attorney, auditor, collection agent, information systems specialist, teaching affiliate, and clinical mentor);
- c. A person serving on the Board of Regents, staff in the Office of the Commissioner of Higher Education, the Institutional Review Board, and any other University board, committee or council; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.
- d. Compliance with a lawfully issued subpoena or judicial order.
- e. Requests in connection with a student's application for financial aid.
- f. Information submitted to accrediting organizations.
- g. To other agencies or institutions that have requested the records and in which the student seeks or intends to enroll or is already enrolled so long as the disclosure is for purposes related to the student's enrollment or transfer.
- h. Requests by federal and state authorities and authorized third parties designated by federal and state authorities to evaluate a federal or state supported education program; to researchers performing certain types of studies; in connection with statewide longitudinal data systems studies and tracking.
- i. In the case of emergencies, the University may release information to appropriate persons in connection with an emergency, if the knowledge of such information is necessary to protect the health or safety of a student or other persons.
- j. To the extent otherwise permitted by law, the results of a disciplinary proceeding or investigation conducted by the University to an alleged victim of a crime.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-5901

## Additional Resources

For more information on FERPA, please see the following links:

1. Family Policy Compliance Office

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2. FERPA 20 USC 1232(g)
3. 34 CFR Part 99
4. Montana Code Annotated

## Student Rights

### **Public Safety Report and Alcohol and Drug Guidelines**

The health and safety of students, faculty, staff, and visitors are of paramount concern to The University of Montana. Each year the University publishes an annual report outlining on-campus security and safety information and crime statistics. The report provides important information for security awareness and crime prevention programs, emergency procedures and reporting crimes, plus law enforcement and safety services on campus.

Additionally, the booklet contains the University's policy on sexual assault and information about support services for victims of sexual assault. The booklet also includes information about the University's drug and alcohol policy, programs and support services for substance abuse, and risk management guidelines for University-related events.

The booklet is available by writing or calling the Office of Public Safety (406) 342-6131 or the Office of the Vice President for Student Affairs (406) 243-5225, The University of Montana, Missoula, Missoula, MT 59812. The information can also be accessed on the University of Montana Student Affairs website and the University of Montana Public Safety website.

### **Student Complaint Procedures**

Under the terms of the Collective Bargaining Agreement between The University of Montana University Faculty Association and The Montana University System, there is a formal procedure for students who have a complaint against a faculty member or an administrator. Information about this procedure is available at the Vice President for Student Affairs website. The ASUM Student Resolution Officer is available to answer questions about procedures and to assist with the process. Time restrictions are important, so students should review procedures immediately if they feel they may have complaints. The Resolution Officer receives voice mail at 243-5431 or email at [asum.resolutionoff@mso.umt.edu](mailto:asum.resolutionoff@mso.umt.edu).

## Notice to Students with Disabilities

Students with disabilities may obtain assistance with the registration process and the relocation of classes (if needed) through Disability Services in Lommasson Center 154 (406) 243 2243 VOICE/TDD.

## Student Conduct Code

The Student Conduct Code, embodying the ideals of academic honesty, integrity, human rights and responsible citizenship, governs all student conduct at The University of Montana-Missoula. Student enrollment presupposes a commitment to the principles and policies embodied in this Code. The Student Conduct Code sets forth University jurisdiction, student rights, standards of academic and general student conduct, disciplinary sanctions for breach of the standards of student conduct and procedures to be followed in adjudicating charges of both academic and general misconduct.

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The Vice Provost for Student Success is responsible for procedural administration of the Student Conduct Code for all general conduct. The Vice Provost for Academic Affairs is responsible for all academic conduct. Copies of the Student Conduct Code can be obtained from the Office for Community Standards, located in Turner Hall . The Student Conduct Code also can be accessed on the <http://www.umt.edu/student-conduct-code>.

### Plagiarism Warning

Plagiarism is the representing of another's work as one's own. It is a particularly intolerable offense in the academic community and is strictly forbidden. Students who plagiarize may fail the course and may be remanded to Academic Court for possible suspension or expulsion. (See Student Conduct Code that precedes this section of the catalog.)

Students must always be very careful to acknowledge any kind of borrowing that is included in their work. This means not only borrowed wording but also ideas. Acknowledgment of whatever is not one's own original work is the proper and honest use of sources. Failure to acknowledge whatever is not one's own original work is plagiarism.

### Class Attendance/Absence Policy

Students who are registered for a course but do not attend the first two class meetings may be required by the instructor to drop the course. This rule allows for early identification of class vacancies to permit other students to add classes. Students not allowed to remain must drop the course through CyberBear to avoid receiving a failing grade. Students who know they will be absent should contact the instructor in advance.

Students are expected to attend all class meetings and complete all assignments for courses in which they are enrolled. Instructors are encouraged to notify advisors or the appropriate administrators regarding students with excessive unexcused absences. Instructors may excuse brief and occasional absences for reasons of illness, injury, family emergency, religious observance, cultural or ceremonial events, or participation in a University sponsored activity. (University sponsored activities include for example, field trips, ASUM service, music or drama performances, and intercollegiate athletics.) Instructors shall excuse absences for reasons of military service or mandatory public service.

Cultural or ceremonial leave allows excused absences for cultural, religious, and ceremonial purposes to meet the student s customs and traditions or to participate in related activities. To receive an authorized absence for a cultural, religious or ceremonial event the student or their advisor (proxy) must submit a formal written request to the instructor. This must include a brief description (with inclusive dates) of the cultural event or ceremony and the importance of the student s attendance or participation. Authorization for the absence is subject to approval by the instructor. Appeals may be made to the Chair, Dean or Provost. The excused absence or leave may not exceed five academic calendar days (not including weekends or holidays). Students remain responsible for completion or make-up of assignments as defined in the syllabus, at the discretion of the instructor.

Instructors may establish absence policies to conform to the educational goals and requirements of their courses with due consideration of the class s diversity. Such policies should be set out in the course syllabus and should include the procedures for giving timely notice of absences, explain how work missed because of an excused absence may be made up, and stipulate any penalty to be assessed for excessive or unexcused absences.

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The UM Faculty Senate encourages the faculty to accommodate students incurring an excused absence by allowing them to make up missed work when this can be done in a manner consistent with the educational goals of their courses. Students expecting to incur excused absences should consult with their instructors early in the term to be sure that they understand the absence policies for each of their courses.

## Major and Minor Requirement Information

### Declaring a Major and Changing a Major

Students indicate on the application for admission the major or majors in which they are interested. Students undecided as to a field of interest may elect to be Undeclared while making program and career decisions. Students must declare a major in a degree granting program prior to completion of 45 credits or after three semesters, whichever occurs first.

Students must complete a major in order to earn a degree or certificate.

Students may change their majors or minors and declare certificates by contacting the academic advisor of the respective major, minor, or certificate program they wish to declare and requesting that they communicate this change to the Registrar's Office. It is strongly advised that students meet with an advisor before changing their major or minor or declaring a certificate.

Students who wish to transfer between Missoula College and the University of Montana-Missoula programs must instead submit an Intra-Campus File Transfer form. Students transferring from Missoula College to University of Montana-Missoula must be evaluated by Undergraduate Admissions to ensure minimum admission requirements are met.

Forms and information are available on the Registrar's Office forms page.

### Credits Required for a Major

Students in a bachelor degree program must complete a minimum of 30 credits in their major. Most majors require more.

Students may elect to earn a single degree with more than one major. Students may complete a double major (two majors) or any number of majors. All requirements for the majors must be completed even though students will receive a single degree such as a Bachelor of Arts with majors in Psychology and Sociology. It is only necessary to complete the total credit requirement for a single bachelor degree.

Courses completed to satisfy the requirements of a major also may be applied toward the General Education Requirement if they appear on the list of approved courses at the time they are taken.

Students in programs in the Missoula College complete requirements as listed in the Missoula College section of this catalog.

### Credit Limitations in a Major

A maximum of 60 credits in the student's major may be counted toward the baccalaureate degree, except some options in Health and Human Performance and Education, majors in Computer Science, Journalism, Law and majors in the College of Business, College of the Arts and Media, College of Health Professions and

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Biomedical Sciences, and the College of Forestry and Conservation are allowed more. Students with combined majors, as opposed to two majors, are allowed to apply 75 credits in the major.

### Grade Requirement

Courses taken to satisfy the requirements of the major must be completed with a grade of C- or better, unless a major requires a higher grade for a course.

A minimum grade average of 2.00 in all work attempted in the major at the University of Montana-Missoula is required for graduation.

### Major Concentration

Groups of courses have been identified which lead to a specialization within one major or between two or more majors. These specializations are called concentrations. The names of approved concentrations will be recorded on the permanent records of those students who have satisfactorily completed the requirements as given in the catalog governing their graduation. A student desiring a particular concentration must satisfy the requirements of the major offering it. If one concentration is offered within two or more majors, the student must satisfy the requirements of only one.

Only courses listed within the supporting major count toward the 60 credit limitation in the major. Courses in other fields do not count toward the maximum of 60 credits in the major even though they may be required or elected for the concentration.

If one major has two or more concentrations, a student may satisfy the requirements for more than one concentration so long as the maximum credit limitations are observed.

### Minor Requirements

Baccalaureate students may elect to complete one or more minors in fields outside their majors. Minors may be in fields unrelated to students' majors or they may be complementary or supportive of majors. A student may not take a minor in the same field of study as his or her major.

A student will not be required to satisfy the requirements of a minor in order to graduate unless that minor is required by the student's major department or school.

Courses completed to satisfy the requirements of a minor also may be applied toward the General Education Requirement if they appear on the list of approved courses at the time they are taken.

### Credits Required for a Minor

To complete a minor, students must earn at least 18 credits in an approved minor listed in this catalog and complete a baccalaureate degree.

Students possessing a baccalaureate degree from an accredited college or university may earn a minor if they have been accepted by the University as an undergraduate degree student. In addition to meeting minor requirements, students must earn from the University of Montana-Missoula a minimum of 9 credits in the minor field and 15 credits overall.

## **Grade Requirement**

Courses taken to satisfy the requirements of the major and the minor must be completed with a grade of C- or better. Some majors require a C or higher grade for some of the required courses. Specific information regarding the major requirements can be found in the majors individual section of the catalog.

A minimum grade average of 2.00 in all work attempted in the minor at the University of Montana-Missoula is required for graduation with the minor.

## **Teaching Minors**

Teaching minors are separate entities from degree minors as described in this section. Teaching minors are identified and requirements listed in the Phyllis J Washington College of Education section of this catalog.



# Bachelor Degree Admission Entering Freshmen < University of Montana

## Bachelor Degree Admission Entering Freshmen

### Academic Eligibility

The University continues to raise the academic standards required for full admission to Baccalaureate programs, and the process will continue in future years. For the current academic year both in-state and out-of-state high school graduates will be offered full admission if they meet the requirements below.

Some departments reserve the right to set higher admission standards for their undergraduate programs. Applicants to these programs will be admitted to the appropriate pre-major program by Enrollment Services-Admissions. Application to the undergraduate degree program is an additional, separate process administered by the department and arranged for by the student seeking acceptance.

1. Graduation from a state accredited high school.
2. Successful completion of the following College Preparatory program:
  - Four years of English.
  - Three years of math, including Algebra I, Geometry and Algebra II (or the sequential content equivalent of these courses). Students are encouraged to take a math course in their senior year.
  - Three years of social studies, including one year global studies (i.e., world history or world geography), one year American history and one year of additional course work (i.e., government, psychology, economics).
  - Two years of laboratory science. One year must be earth science, biology, chemistry, or physics; the other year can be one of those sciences or another approved college prep laboratory science.
  - Two years chosen from the following:
    - foreign language (preferably two years),
    - computer science,
    - visual and performing arts, or
    - vocational education units.
3. Students must meet one of the following admissions requirements:
  - ACT composite of 22, or
  - SAT combined score of 1540, or
  - a 2.50 cumulative grade point average, or
  - class rank in the upper half of the graduating class
  - Students whose tests or GPA are significantly below this level may be admitted on a conditional basis.
4. Students must meet a minimum Math Proficiency score of:
  - 22 on the ACT Math section or
  - 520 on the SAT Math section or
  - A score of 3 or above on the AP Calculus AB or BC Subject Exams. In lieu of the above requirement, students can complete a Rigorous High School Core that includes four years of math with grades of C or higher and three years of lab science or
  - 4 on the International Baccalaureate Calculus Exam.
5. Students must meet a minimum Writing Proficiency score of:
  - 18 on the Combined English/Writing section of the Optional Writing Test or a 7 on the Writing

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Subscore of the ACT; or

- 440 on the Writing Section of the SAT or a 7 on the Essay the SAT; or
- 3.5 on the Montana University System Writing Assessment; or
- 3 on the AP English Language or English Literature Examination; or
- 4 on the International Baccalaureate Language A1 Exam or
- 50 on the CLEP Subject Exam in Composition.

## Home-Schooled Students

Information on admission requirements for home-schooled students or students who graduate from a non-accredited high school can be found at the UM admissions home school web page.

## Traditional-Age Freshmen with GED

GED freshmen are those students who have passed the GED and enter college within three years of the date they would have graduated from high school. Admission will be determined by current University of Montana criteria for GED freshmen. All GED freshmen applicants are required to take the ACT or SAT.

## Non-Traditional Freshmen

Non-traditional freshmen are those students who are over 21 years old and who did not enter college for a period of at least three years from the date of high school graduation. Admission will be determined by current University of Montana criteria for non-traditional students. Non-traditional freshmen will be admitted conditionally if test scores are not posted on the high school transcript or if a student has never taken the ACT or SAT.

The following students are exempt from Standards 1, 2, 3, 4 and 5 above:

- Summer Only Students
- Part-time students taking seven or fewer college-level semester credits.

## Conditional Acceptance

Students who have a high school diploma or its recognized equivalent, but do not otherwise meet the admission requirements, may be admitted on a conditional basis. To be admitted conditionally, the Admissions Committee must determine that a student could be successful by taking advantage of the academic support services that are available. Students will be granted full admission after completing 24 credits with a grade point average of at least 2.0. Students are expected to complete the 24 credits within two semesters but must complete them within three semesters. In cases where academic preparation falls well below the admission standards listed above, applicants will be directed to the Missoula College where courses can be taken to strengthen their preparation for success at the University of Montana.

## Future Trends in Admission Eligibility at UM

Admission Grid

In future years, the academic criteria for full admission to Baccalaureate programs at The University will continue to rise. Students who fail to meet these stricter admission standards may be admitted on a conditional basis (see above).

## How to Apply

Applications for admission are available from Enrollment Services-Admissions by request or are available on the University Admissions website. An application for admission is complete when Enrollment Services-Admissions receives the credentials described below.

1. Application form. Applications must be complete and signed.
2. Application Fee. The fee is \$30. This non-refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. Applications are not processed prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech or Highlands College (former College of Technology) in Butte, Helena College (formerly Helena College of Technology), and University of Montana-Western in Dillon.
3. Test scores. Official ACT or SAT results should be sent directly from the testing company or may be posted on the high school transcript.
4. Final high school transcripts. Transcripts should be submitted after graduation and must include a graduation date and final GPA. Eligibility for admission and scholarships will be verified from this transcript.
5. Immunization Form. All students are required to submit a completed Medical Requirement Form to the Curry Health Center prior to registration. It is important that the immunization record be complete, accurate and validated by a health official.

## When to Apply

Applications and all required documents submitted by the following dates will receive priority consideration:

- March 1 - Fall semester
- November 15 - Spring semester

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Applications received after the priority dates are considered on a space-available basis.

## Associate of Applied Science, Associate of Arts and Certificate Admission

The Associate of Applied Science and Certificate of Applied Science programs in the Missoula College are designed to lead an individual directly to employment in a specific career path. In some instances, particularly in allied health, the degree is a prerequisite for taking a licensing examination. Students may pursue a baccalaureate degree at the University of Montana after completing an AAS degree through a Bachelor of Applied Science degree plan. The Associate of Arts degree is a University of Montana transfer degree which offers students the opportunity to complete a 60 credit transfer degree toward completing a baccalaureate degree at the University of Montana or other accredited institutions of higher education.

### Academic Eligibility

To be eligible for admission, students must have graduated from an accredited high school or passed the HiSET or GED. Students interested in becoming University of Montana (Mountain Campus) students must meet the admission requirements of the University of Montana.

### How to Apply

Applications are available from Enrollment Services-Admissions or the Missoula College by request or are available on the Missoula College website.

An application for admission is complete when the Missoula College receives the credentials described below.

1. Application form. Applications must be completed and signed.
2. Application fee. The fee is \$30. This non-refundable application fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Missoula College, UM Helena College of Technology, and University of Montana-Western.
3. Proof of high school graduation/HiSET/GED. An official high school transcript with graduation date or GED score report must be sent to the Missoula College.
4. All students are required to submit a completed Medical Requirement Form to the Curry Health Center two weeks prior to registration. It is important that the immunization record be complete and accurate and validated by a health official. Students born after December 31, 1956 must submit proof of immunization or titer against Rubella and measles (Rubeola). Students will not be allowed to register until the Curry Health Center has received proof of immunization.

#### Critical Information Required Prior to Advising and Completion of Registration:

All students are required to take either the ACT, SAT or Compass-E-Write test and submit scores (associated with writing) to the Admissions Office. Montana students may submit the Montana University System Writing Assessment Score (MUSWA) in lieu of these tests.

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In addition to providing the required placement scores for writing courses, the academic departments of the Missoula College require course placement information for math courses. Students must provide ALEKS placement score information or transfer course approval. This information is critical to the advising process and the student registration process; neither of which will be completed without the information being supplied prior to the process.

### **When to Apply**

Applications are considered on a first come, first-served basis. The Missoula College will notify applicants of their status once their application has been processed.

# Bachelor of Applied Science Admission < University of Montana

## Bachelor of Applied Science Admission

### Academic Eligibility

Applicants must hold an Associate of Applied Science degree from an accredited institution with a minimum cumulative grade average of 2.5.

### How to Apply

UM baccalaureate applications are available from Enrollment Services-Admissions or the Missoula College by request or are available on the Missoula College website. Applicants should contact the Bachelor of Applied Science advisor at Missoula College, 406-243-7801. The applicant and advisor meet to discuss application procedures as well as degree plan identification and required approval.

Receipt of the following constitutes a complete application toward completing a B.A.S. degree:

1. Application Form. Applications must be complete and signed.
2. Official college/university transcripts. The student must supply a complete official transcript from each regionally accredited college or university attended.
3. Application Fee. The fee is \$30 (if the applicant is new to The University of Montana system).
4. Immunization Form. All students are required to submit a completed Medical Requirement Form to the Curry Health Center two weeks prior to registration if the applicant is new or has been absent for more than 24 months from the University of Montana system.

### When to Apply

Applications from students who hold an A.A.S. degree with a GPA of 2.5 are accepted on a continuing basis. Applicants in the process of completing the A.A.S. degree are encouraged to begin the application process during their final semester. Students are not, however, admitted until after the A.A.S. degree has been awarded.

## Distance Education

The University of Montana provides the opportunity to apply as a Distance Education only student. Students who are interested in applying for this status must meet the University's general admission requirements for freshman and transfer students. This admission status is designed for students who are registering for completely online courses only. When applying for this status, students are not required to provide proof of immunization or complete a Medical Requirement Form. Since Distance Education only students have some of the mandatory fees waived, they are not eligible for health insurance, services provided by the Curry Health Center, athletic event discounts or the Campus Recreation facilities.

Currently enrolled students or former University of Montana students must change their status by completing a Distance Learning Change of Status Form.



## Former University of Montana-Missoula Students - Readmission

### Readmission to the University After 24 Months of Non-attendance

If former students are planning to attend a summer session or an academic year semester but were not in attendance during the immediately preceding 24 months, then they must apply for readmission before being eligible to register for courses. Students should reapply by July 1 for autumn semester attendance, and by November 1 for spring semester attendance. See the Registrar's Readmission website for additional information.

Missoula College (formerly College of Technology) students must reapply for readmission at the Missoula College Registrar's Office (909 South Avenue) or online at the UM Admissions Missoula College web page.

Mountain Campus students (seeking baccalaureate or higher degrees) must apply for readmission via the Enrollment Services Office in the Emma Lommasson Center or online at the UM Admissions web page.

Some specific programs at the Missoula College require students who do not enroll for a semester or more (excluding summer) to apply for readmission into that program.

All students who are both in good standing and (i) currently enrolled or (ii) readmitted to the University may pre-register for the subsequent semester, unless a registration hold exists on the student's record.

Students previously enrolled at The University of Montana-Missoula who have interrupted their enrollment for more than 24 months or more must submit an application for readmission. Applications for readmission may be obtained from the Registrar's Office, the Griz Central Registration Counter, Enrollment Services-Admissions, all located in the Emma B. Lommasson Center (EL), or the Missoula College Registrar's Office.

**Former undergraduate degree students who do not plan to change their status and who have attended another college/university since attending The University of Montana-Missoula, even if their absence from UM has been less than two years in duration, must submit college transcripts.**

Former students who are applying for readmission must comply with Immunization Requirements as listed on the Curry Health Center website.

Former undergraduate students are not required to pay the undergraduate application fee unless they are changing from an undergraduate status to a graduate status or vice versa. The application fee is paid only once at the undergraduate level. For additional information, contact the Registrar's Office at 406-243-2939 or visit the Registrar's Readmission website for additional information.

## General Admission Information

### Advanced Placement (AP) Program/College Level Examination Program (CLEP)

College credit may be granted based on achievement in college level high school courses, provided the University has received satisfactory scores from the College Level Entrance Examination Program (CLEP) or the Advanced Placement Program (AP) examinations.

It should not be assumed that credit granted by other colleges/universities would be allowed by UM. Specific questions regarding the Advanced Placement Program should be directed to Enrollment Services-Admissions.

The University policy for awarding credit on the basis of AP/CLEP is available on the Admissions Advanced-Credit web page.

### International Baccalaureate

The University of Montana recognizes IB achievement and grants college credit for each Higher Level exam passed provided the University has received satisfactory scores from the International Baccalaureate Program, with an examination score of four or higher. University policy on awarding IB credit is available on the Admissions Advanced-Credit web page.

The University grants credit for Standard Level exams for some IB languages or if they are taken as a component of the full Diploma. UM will offer a maximum of 30 credits (sophomore equivalent standing) to all incoming students who have received a Diploma with a score of 30 or better, with no individual exam scores lower than four. These credits will normally be distributed as electives, although students who desire credit for specific UM courses, may petition the Admissions Office. All incoming students who have completed the IB Diploma will be given priority consideration for admission to the UM Davidson Honors College.

General Education and course equivalency credit is granted for the exams listed below as indicated. These credits cannot be used toward upper-division coursework. Enrollment Services-Admissions will provide students with an evaluation of their credits upon receipt of official scores. If you do not see a specific IB exam on our list and would like it evaluated for credit, please email Admissions with the following information: exam title and level.

### AP Capstone Diploma

The University of Montana recognizes and awards credits for the AP Capstone Diploma. For more about the AP Diploma, visit the College Board AP Capstone website.

All incoming students who have completed the AP Capstone Diploma will be given priority consideration for admission to UM s Davidson Honors College. Students completing the AP Capstone Diploma Research course will earn the equivalent of 3 credits of HONR 190 Honors Research. Students completing the AP Capstone Seminar will earn the equivalent of 3 credits of HONR 194 Honors Seminar.

General Education and course equivalency credit is granted for the posted exams as indicated. These credits cannot be used toward upper-division coursework. Enrollment Services-Admissions will provide students with an evaluation of their credits upon receipt of official scores.

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If you do not see a specific AP course on our list and would like it evaluated for credit, please contact Admissions with the course title and level. To request that your score reports be sent to the University of Montana visit the AP website (recommended) or call AP directly at (212) 713-8000. The University of Montana awards college credit to undergraduate degree students on the basis of official score reports from the Advanced Placement Program/College Board.

### Foreign Language Placement

Transfer credit is not granted for high school foreign languages. Placement testing is done by the Department of World Languages and Cultures to determine appropriate class placement for entering students.

### Immunization Requirements

Montana state law requires postsecondary students to provide proof of immunization. Students must complete the Medical Requirement Form and return the form to the Curry Health Center prior to orientation and registration.

Registration cannot be completed without this documentation. A Medical Requirement Form is sent with the admission acceptance letter. For additional information visit the Curry Health Center website.

### High School Pilot Program

Area high school juniors and seniors of outstanding ability can enroll in University classes under the High School Pilot Program. Students must have approval from their high school counselor/principal and parent/guardian if under age 18. High school students earn college credit, receive an early introduction to University opportunities and are able to develop skills and knowledge beyond the high school level. For more information, contact the Coordinator of the High School Pilot Program, Enrollment Services-Admissions, Lommasson Center 101, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243-6266. For opportunities in the Missoula College, phone (406) 243-7828.

### Dual Credit Program

The Dual Credit Program enables high school juniors and seniors of outstanding ability to earn college credit in certain high school courses. Students must have approval from their high school counselor/principal and parent/guardian if under age 18. For information, go to the Dual Credit Program website or contact Jordan Patterson, Missoula College, at (406) 552-8689.

### International Student Exchange Program (ISEP)

The University of Montana is a member of the International Student Exchange Program (ISEP), which allows University of Montana students to spend a semester, a year, or a summer abroad at one of ISEP's 141 member institutions in 42 foreign countries. ISEP offers reciprocal exchanges (students pay their home tuition, room and board, and create a space for an incoming international student) and ISEP-Direct programs (students pay a program fee covering tuition, room and board through the University of Montana to ISEP). Other expenses for which the student is responsible include: books and supplies, local transportation, round-trip airfare, or personal expenses.

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For information on ISEP, please contact International Programs, International Center, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243 2288.

### **National Student Exchange (NSE)**

The University of Montana-Missoula participates in the National Student Exchange (NSE) program with 190 other state colleges and universities. This program offers students the opportunity to become better acquainted with different social and educational patterns in other areas of the United States. NSE encourages students to experience new life and learning styles, appreciate differing cultural perspectives, learn more about themselves and others and broaden their educational backgrounds through specialized courses or unique programs which may not be available on the home campus. Qualified students may participate in the exchange program for up to one academic year. For more information, contact the Coordinator of the National Student Exchange Program, Enrollment Services-Admissions, Lommasson Center 101, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243-6266. Find more information on the National Student Exchange website.

### **Special Admission Committee**

A special admission committee reviews applications from students who do not meet the regular admission standards.

### **Enrollment Limitation**

The University of Montana-Missoula may deny or condition admission, readmission, or continuing enrollment of any individual who, in the judgment of the University, presents an unreasonable risk to the safety and welfare of the campus and persons thereon. In making such judgment, the University may, among other things, take into account the individual's history and experience relative to

1. violence and destructive tendencies,
2. behavior on other college campuses, and
3. any rehabilitative therapy the individual may have undergone.

### **The University of Montana-Missoula Adopts the following Admission Review Procedures**

The Assistant Vice President for Enrollment, the Dean of the Graduate School or the Chair of the Admissions Committees of the various professional schools at The University of Montana-Missoula shall be responsible for the administration of the Admissions Review procedures established to implement Board of Regents policy. When the responsible admissions officer has reason to believe an applicant may present an unreasonable risk to the safety and welfare of the campus and persons thereon, additional information regarding the applicant's background and experiences shall be requested. No applicant's admission may be barred automatically, solely by reason of a criminal conviction, if state supervision has terminated, or solely by reason of a youth court adjudication. The responsible admissions officer may request additional information in the following instances:

1. When an applicant has been convicted of a felony;

## University Of Montana

2. When an applicant has been adjudicated as a danger to others or to self;
3. When an applicant has been suspended or expelled for disciplinary reasons from other educational institutions, either before or after the applicant has been accepted at The University of Montana-Missoula;
4. When, on the basis of other facts, the Assistant Vice President for Enrollment or other responsible officer has reason to believe an applicant may present an unreasonable risk to the safety and welfare of the campus and persons thereon.

After obtaining additional information, the responsible admissions officer may admit the applicant or refer the application to the Admissions Review Committee for review and recommendation.

### Evaluation of Transfer Credits

Evaluation of transfer credits is determined by Enrollment Services-Admissions at the time of admission. The evaluation is included in the acceptance packet and in the advising materials distributed during orientation. All college-level credits from regionally accredited colleges and universities will be accepted for transfer. Credits from colleges or universities that are candidates for regional accreditation will be accepted only after the student has successfully completed twenty semester credits at UM. Course work from unaccredited schools is not accepted or evaluated unless an individual exception is requested by the student and approved by a committee composed of the Academic Vice President, Assistant Vice President for Enrollment and the Registrar.

Enrollment Services-Admissions determines whether or not courses are college-level, the appropriate grading and credit conversion and the applicability of the transfer courses to UM's general education requirements. Transfer courses graded C- or above will count toward general education and major, minor, option or certificate requirements. Transfer courses with grades of D or D- transfer as elective credit. The student's major department may further evaluate the applicability of transfer courses to the student's selected program of study. College-level courses which do not have an equivalent at UM will be accepted as elective credits.

Up to 15 credits of vocational-technical course work from regionally accredited schools are accepted as free electives in transfer toward an AA, AS, or baccalaureate program. Up to 20 credits may transfer for students completing an AAS degree. Missoula College technical courses are designated by a course number suffix of "T."

Elective credit may be given for military courses according to the recommendations in the American Council (ACE) Service Guide. Elective credit may also be given for training programs recommended by the ACE Guide.

The University of Montana database of courses transferable from colleges and universities is available on the Admissions transfer credit web page.

Per Board Of Regents policy #301.5, students have the right to appeal their official evaluation by contacting the Admissions Office. If a student exercises the appeal rights set out in this policy, the review and a final decision must be completed by the class pre-registration date for the following academic term. The student must initiate the appeal process, in a timely manner, in order to give the institution time to complete its review before the deadline described in the preceding sentence.

## Evaluation of Transfer Credit-Missoula College

Missoula College students must submit official transcripts for evaluation. If a student feels that a course taken at another institution may substitute for a specific Missoula College course, the evaluation will be done by the associate dean and the chair of the department of the equivalent course. Transfer courses graded C- or above will count toward general education requirements. Transfer courses with grades of D or D- transfer as elective credit. The student's major department may require a grade above C- to meet specific major requirements.

## Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education's Professional Student Exchange Program enables students in thirteen western states to enroll in out of state professional programs when those programs are not available in their home states. Exchange students receive preference in admission. They pay reduced levels of tuition: for most students, resident tuition in public institutions or reduced standard tuition at private schools. The home state pays a support fee to the admitting schools to help cover the cost of students' education.

The following professional programs are not available in Montana but are supported by the Montana WICHE program. They are dentistry, medicine, occupational therapy, optometry, osteopathic medicine, podiatry, public health and veterinary medicine.

The Certifying Officer for the State of Montana can be contacted for specific details about the program.

WICHE Student Exchange Program  
Montana University System  
2500 Broadway  
Helena, MT 59620  
(406) 444-6570 or Fax: (406) 444-1469.

## Western Undergraduate Exchange Program (WUE)

The Western Undergraduate Exchange (WUE) Scholarship program at The University of Montana-Missoula is a highly competitive academic merit based scholarship which is strictly monitored. Awards are decided upon a comprehensive review of a student's cumulative G.P.A. and test scores. When undergraduate students apply and are admitted from a WUE state they are automatically considered for the WUE, if not eligible for the WUE they are reviewed for other awards. The WUE states are limited to students who are legal residents of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming. Please note: Only first time incoming freshman and new transfer students are eligible for the WUE scholarship. *Currently enrolled students not originally awarded WUE, post-baccalaureate students and returning students are not eligible for WUE.*

The amount of the WUE scholarship will always represent the 150% of the cost of Montana resident tuition and fees. The WUE scholarship will automatically be renewed each semester providing students follow all conditions of the WUE Scholarship.

The conditions of the WUE Scholarship are:

## University Of Montana

- The award is in effect for four years or until completion of a bachelor's degree (120 credits) whichever comes first.
- You must maintain a 3.0 grade point average and register for at least 12 credits each consecutive term of enrollment. (Please note that completion of 15 credits per semester leads to graduation within four years.) Courses taken through the School of Extended and Lifelong Learning (SELL) are not WUE eligible and are not counted in meeting the requirement to be full-time.
- Tuition and fees at UM between 12 and 21 credits costs the same. The best way to maximize your tuition dollars is by taking advantage of this cost savings during your scholarship eligibility.
- You may not earn Montana residency for fee purposes at any unit of the Montana University System.
- Students who are not continuously enrolled (except summers), transfer to Missoula College, establish Montana residency or become distance only students, forfeit the scholarship. WUE recipients cannot also receive the LAS scholarship and cease to be eligible for the WUE upon completion of a bachelor's degree.
- The WUE scholarship can be used during summer terms.
- Post-baccalaureate students (i.e. students who have previously earned a bachelor's degree) and graduate students are not eligible to receive the WUE.
- Students who do not meet scholarship conditions may appeal for reinstatement using the [Continuing Student Scholarship Appeal Form](#).

To be eligible for the WUE scholarship first time incoming freshman and transfer students must apply for admission and be admitted to The University of Montana. Awarding of the WUE will occur on a space available rolling basis with priority given to those who apply before December 31st. Further details are available from the Enrollment Services-Admissions Office website.

## Student Conduct Code

The Student Conduct Code, embodying the ideals of academic honesty, integrity, human rights and responsible citizenship, governs all student conduct at The University of Montana-Missoula. Student enrollment presupposes a commitment to the principles and policies embodied in this Code. The Student Conduct Code sets forth University jurisdiction, student rights, standards of academic and general student conduct, disciplinary sanctions for breach of the standards of student conduct and procedures to be followed in adjudicating charges of both academic and general misconduct. The Vice President for Student Affairs is responsible for procedural administration of the Student Conduct Code for all general conduct. The Provost and Vice President for Academic Affairs is responsible for all academic conduct. Copies of the Student Conduct Code can be obtained from the offices of the Vice President for Student Affairs, the Provost and Vice President for Academic Affairs, Residence Life, and Associated Students of The University of Montana-Missoula (ASUM). The Student Conduct Code also can be accessed from the Vice President for Student Affairs Student Conduct Code web page.

## Service Members Opportunity College

The University is a member of Service members Opportunity Colleges, a consortium of over 1300 institutions pledged to be reasonable in working with service members and veterans trying to earn degrees.

# University Of Montana

VETS Office

1000 E. Beckwith

Missoula, MT 59801

Phone: (406) 243-2744

Fax: (406) 243-5444

[vetsoffice@umontana.edu](mailto:vetsoffice@umontana.edu)



## Graduate Nondegree Status

Graduate nondegree status allows students who have not been formally admitted to a graduate degree program to receive graduate credit for courses.

Up to nine semester nondegree graduate credits (or the credits earned during a single semester, whichever is greater) may be applied toward a subsequent graduate degree program, with the approval of the student's program chair and the graduate dean. Acceptance as a graduate nondegree student does not imply future admission to a degree program.

Graduate nondegree students may take U/G courses for either graduate or undergraduate credit, as defined by the university catalog. Graduate credits will be assigned automatically unless a request for undergraduate credit is submitted to the Graduate School by the fifth week of the semester. Undergraduate credits taken as a graduate nondegree student cannot be applied to a subsequent graduate degree.

Applicants admitted as graduate nondegree students are NOT ELIGIBLE for federal financial aid. Graduate nondegree students are assessed the graduate level tuition and fees at the master's level rate for all credits taken.

Applicants must have earned a baccalaureate degree (or higher degree) from a regionally accredited college or university prior to enrollment in the graduate nondegree status.

Applicants seeking graduate nondegree status must apply online at the UM Graduate School website and pay a \$60 non-refundable application fee. Deadline for submitting a graduate nondegree application is prior to the fifteenth day of classes each semester.

## Graduate Nondegree Readmission

Students who previously attended The University of Montana in a graduate nondegree status and have not been enrolled for 24 months or more may use the graduate nondegree readmission form to reapply for the same status.

Graduate nondegree readmission forms can be downloaded from the Forms section of the UM Graduate School website. Graduate nondegree students applying for readmission pay a \$20 non-refundable application fee.

## Graduate Degree

Graduate degree admission is for candidates seeking to complete a Master's, Specialist, or Doctoral program at UM. Program information and deadlines are listed on the UM Graduate school website. Each academic department conducts the initial evaluation of completed application packets and submits the packets, with recommendations for admission or denial, to the Graduate School for final decisions.

Applicants seeking graduate status must apply online at the UM Graduate School website and pay a \$60 non-refundable fee.

## **HiSET or GED (General Education Development) < University of Montana**

### **HiSET or GED (General Education Development)**

A person who is not a graduate from an accredited high school may be eligible for admission by earning passing scores on the HiSET or GED test. HiSET or GED students who have been out of high school for less than three years or are under the age of 21 must also submit ACT or SAT scores. For additional information and test center locations in Montana, contact the Office of Public Instruction, Helena, MT 59601.

## International Student Admission < University of Montana

### International Student Admission

The University of Montana-Missoula International Programs-International Admissions Office will issue the Immigration Form I-20 (necessary for obtaining an F 1 student visa) to international applicants who are academically eligible for the undergraduate degree status (see above) and who supply complete credentials as described below. In certain situations an international applicant may not need an I- 20; in these cases, International Programs-International Admissions should be contacted for individual advice regarding admission status, academic eligibility, and admission requirements. International students are encouraged to submit ACT or SAT scores if available, but ACT or SAT scores are not required for admission.

#### How to Apply

Receipt of the following credentials constitutes a complete international application for admission:

1. International application form. This form can be obtained by contacting International Programs-International Admissions. The form must be complete and signed. Applications are also available on the UM Admissions International web page.
2. \$30.00 paper application fee. This non refundable fee is payable once at the undergraduate level when payment is followed by enrollment. In all other cases record of payment will remain on file for one year. Payment of this fee is expected prior to consideration of the application. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Academic Credentials:
  1. Official or certified copies of non-U.S. academic credentials beginning with secondary school and continuing through the highest level of achievement. The transcripts must be in the original language accompanied by an English translation. The applicant may make the translation themselves. Photocopied, scanned, or emailed copies will not be accepted.
  2. U.S. transcripts. Complete official transcripts showing all U.S. high school and college/university attendance.
4. Statement of Financial Support. The applicant must submit a certified statement from a bank or sponsor verifying that adequate financial resources are available to pay for the student's estimated expenses for the first year (tuition, fees, room, board, miscellaneous expenses, student health insurance, expenses of dependents, etc.). This estimated amount is adjusted annually and is available by contacting International Programs-International Admissions.
5. English Language Proficiency.

*Montana University System campuses require international-student applicants to present evidence of proficient English use. Campuses may impose additional requirements on applicants from other countries in order to assure student success.*

The University of Montana considers applicants to be international students if they are neither U.S. citizens, immigrants (permanent residents) nor refugees. These applicants may include holders of F (student) visas, J (exchange visitor) visas, and M (vocational training) visas.

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All international students must be academically prepared and demonstrate sufficient proficiency in English to qualify for admission. In order to demonstrate sufficient proficiency, students must meet one of the following admissions standards at the undergraduate level:

<b>PROFICIENCY EXAMINATION</b>	<b>FULL ADMISSION</b>	<b>CONDITIONAL ADMISSION</b>
TOEFL iBT	70 and above	69 and below
TOEFL PBT	525 and above	524 and below
TOEFL CBT	193 and above	192 and below
IELTS	6.0 (no band below 5.5)	5.5 (no band below 5.0)
MELAB	74 and above	73 and below
SAT - Writing Score	440 and above	
ACT - English Writing	18 and above	
STEP EIKEN	Grade Pre-1	
UM English Language Institute	525 TOEFL ITP or recommendation from ELI	
ELS Language Center	Successful completion of Program Level 112	
Kaplan Aspect	Successful completion of Higher Intermediate Level 112	
Vancouver English Centre	Successful completion of Level 11	
All inquiries about evidence of English proficiency and English language proficiency test scores should be directed to Enrollment Services-Admissions.		

Proficiency Examination

## Exemptions

Exemptions to the English proficiency policy may be considered for any one of the following:

- applicants whose native language is English;
- applicants with two or more years of attendance at an institution of higher education where English is the primary language of instruction; or
- applicants who transfer an equivalent for WRIT 101.

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Students who are citizens of the following countries need not submit proof of English language proficiency unless English is not the student's native language. These countries include: Australia, Canada, Ireland, New Zealand, the United Kingdom, and South Africa.

Students who have test scores below the minimum requirement may be eligible for conditional admission.

Any questions concerning the evidence of proficiency in English should be directed to International Programs-International Admissions. When the student arranges to take one of the proficiency tests, he or she should request that examination results be sent directly to

International Programs-International Admissions

The University of Montana-Missoula

Missoula, Montana 59812.

(Code N. 4489 00)

## Full Admission

The University of Montana will consider for full admission only those undergraduate students providing evidence of English language proficiency in the form of one of the scores listed above:

PROFICIENCY EXAM	SUPERIOR PROFICIENCY	*ADVANCED PROFICIENCY*	*INTERMEDIATE PROFICIENCY*
iBT TOEFL	92 or higher	81 to 91	70 to 80
PBT TOEFL	575 or higher	550 to 574	525 to 549
CBT TOEFL	234 or higher	213 to 233	192 to 212
IELTS	6.5 (no band <6.0)	6.5 (no band <5.5)	6.0 (no band < 5.0)
MELAB	83 or higher	78 to 82	74 to 77

Admissions

*	Full Admission with Academic Support: International-student applicants qualify for admission with academic support if they have <ol style="list-style-type: none"><li>completed one of the English proficiency examinations (either TOEFL, IELTS, or MELAB) and</li><li>earned scores within the ranges presented below:</li></ol>
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Any student scoring in the advanced or intermediate proficiency ranges are strongly recommended to enroll in academic support service courses.

- During their first semester of attendance, advanced-proficiency students may take 3 but no more than 6 credits coursework in English as an Academic Second Language (EASL).
- During their first two semesters in attendance, intermediate-proficiency students may take 6 but no more than 12 credits of coursework in EASL.

Academic Support coursework entails EASL courses, credited toward a degree. The University offers EASL 250 and EASL 251 (intermediate) as well as EASL 450 and EASL 451 (advanced) in order to assist international students in becoming ready for and effective in mainstream college coursework.

## Conditional Admission

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Students who do not meet the required English language proficiency for full admission but are otherwise academically qualified may seek eligibility for conditional admission. Students submit International applications and all required supporting documents to the Admissions Office, and upon a review of their academic eligibility, students may then be admitted conditionally. Enrollment Services issues the conditional-acceptance letter and an I-20 form and then forwards this information to the English Language Institute.

*Summary: An iBT score of 70 is required for full admission; an iBT score between 70-93 places an academic-support recommendation on full admission. These international students are encouraged to complete one or more Academic Support courses which count for degree credit.*

*Justification: A score below 70 iBT indicates a pre-emergent proficiency for academic purposes, failing a full-admission standard; a score between 70-93 iBT indicates emerging proficiency for academic purposes, thus meeting a full-admission standard with a recommendation for academic support with a projected increase of 12 iBT points per semester; emerging proficiency is intermediate (70-81) and advanced (82-93). These students enroll in a program of study delivering academic support that respects timely passage toward a program of study leading to degree. This range reflects most universities' admissions standards and sets a ceiling with those of prestigious ones.*

*It is **recommended**,*

- 1. this policy be revisited for review and revision to respond to developments,*
- 2. an admission deadline for international-student applications is May prior to the Academic Year, and*
- 3. ASCRC coordinate its recommendations for this undergraduate international-student standard with Graduate Council, setting the graduate international-student standard.*

## When to Apply

Applications and all required documents must be received by the following dates:

- Autumn Semester Deadline May 15
- Spring Semester Deadline October 15

Applications received after the deadline will be considered for admission for the next term.

# Transfer Student Admission < University of Montana

## Transfer Student Admission

### Academic Eligibility

Undergraduate degree applicants who have graduated from high school or have earned a HiSET or GED and have attempted twelve or more college level credits must meet the academic eligibility requirements described here. Any undergraduate degree transfer applicant who has attempted fewer than twelve college level credits must meet the academic eligibility requirements for freshman mentioned in the freshman admission section.

Applicants must present a 2.00 (C) cumulative grade average (on a 0-4 scale) for all college level work attempted to be eligible for admission.

### How to Apply

Applications for admission are available from Enrollment Services-Admissions by request or are available on the University Admissions Transfer web page.

Receipt of the following credentials in Enrollment Services-Admissions constitutes a complete application for admission:

1. Application Form. Applications must be complete and signed.
2. Application Fee. The fee is \$30.00. This non-refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. An application cannot be considered prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech, Montana Tech College of Technology, Helena College of Technology, and University of Montana Western.
3. Official College/University Transcripts. The student must supply a complete official transcript from each regionally accredited college or university attended, and from each college or university attended holding candidate status for regional accreditation. Applications from students who are enrolled at the transfer school while applying to UM will be considered for admission based on current official transcripts showing all academic work completed and posted to date. The final official transcript must be on file before the second registration at UM. Academic eligibility will be reviewed upon receipt of the complete transcript.
4. Immunization Form. All students are required to submit a completed Medical Requirement Form to the Curry Health Center two weeks prior to registration. It is important that the immunization record be complete and accurate and validated by a health official. Students born after December 31, 1956 must submit proof of immunization or titer against Rubella and measles (Rubeola). Students will not be allowed to register until the Curry Health Center has received proof of immunization.

### When to Apply

Applications and all required documents submitted by the following dates will receive priority consideration:

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- March 1 - Autumn semester
- November 15 - Spring semester

Applications received after the priority dates are considered on a space-available basis.

### General Education for Transfer Students

Students transferring credits from other institutions must meet all requirements by transfer, by examination, or by completing courses at the University of Montana-Missoula.

UM accepts Associate of Arts (AA) and Associate of Science (AS) Degrees from US colleges and universities accredited by regional accrediting agencies recognized by the US Department of Education. AA and AS Degrees from other institutions will be reviewed on an individual basis. A completed AA or AS degree satisfies UM's lower-division General Education requirements; students must still complete the advanced writing course and are encouraged to explore lower-division language courses to enhance their major. *Since Associate of Applied Science (AAS) Degrees focus on technical skills, the degree does not necessarily satisfy all lower-division General Education requirements at UM.*

According to Board of Regents policy, students who can demonstrate that they have completed an approved lower-division general education requirement at an approved Montana institution of higher education will be deemed to have completed general education requirements except for the advanced writing requirements in their majors.

Montana University System transfer students who have completed the lower-division course work in an approved general education program prior to admission should request that the Registrar of the other school certify completion of these requirements to the Admissions Office.

Students who have earned 20 or more credits equivalent to the approved Montana University System Transfer Core (see MUS Transfer core website) as a degree-seeking student at another institution prior to their initial registration at UM-Missoula may choose to complete the MUS Transferable General Education Curriculum to satisfy all UM lower division General Education requirements. Students will still have to complete UM's advanced writing requirement.

In order to determine if transfer course work satisfies UM General Education requirements, the credits for each course are rounded. For example, courses from schools on other calendars (such as quarters or trimesters) that are articulated on UM transcripts at 2.5 credits or higher will be rounded to 3 credits for the purpose of fulfilling, or partially fulfilling, General Education requirement groups I-XI. This rounding rule does not apply when calculating students total completed credits for graduation requirements, nor towards the 39 upper-division credit requirement.

Students who have completed a bachelor degree at the University or elsewhere will be presumed to have completed the General Education Requirement.

Admissions & New Student Services will evaluate all transfer credits for General Education credit. Students who wish to appeal that evaluation may petition the Graduation Appeals Subcommittee of the Academic Standards and Curriculum Review Committee, but such petitions must be initiated during the first semester of the student's attendance following that evaluation.

### Writing Course Requirement Regarding Transfer Students



## University Of Montana

The Admissions Office (406-243-6266) evaluates transcripts for course equivalencies, with the exception of UM s approved writing courses.

This information pertains only to the intermediate writing course, not the departmental advanced writing requirement. Students should speak to their major department regarding any issues relating to the advanced writing requirement.

If a student believes a course taken at another institution meets the intermediate writing course requirement, the student may petition for course exemption through the Writing Committee. The student must provide the materials listed below. Materials should be submitted to Camie Foos in the Faculty Senate Office, UH 221, [camie.foos@mso.umt.edu](mailto:camie.foos@mso.umt.edu), 406-243-5553.

**Students within two semesters of graduation must use the Graduation Appeal process in place of the Intermediate Writing Course Exemption Appeal process.**

Students applying for course exemption through the Intermediate Writing Course Exemption Appeal process must submit the following materials. Incomplete applications will not be considered.

1. A cover letter outlining the basis for the request. The cover letter should clearly articulate how the proposed course meets the learning outcomes of Intermediate Writing Courses at the University of Montana (listed below). Include pertinent information such as contact information, student ID number, and how you fulfilled this requirement in a course at your previous institution.
2. Evidence of a C- or better in the course.
3. A syllabus and course description, and any available writing assignment instructions. The syllabus or assignment instructions must show that the course required at least 16 pages of writing and that 50% of the course grade was based on writing performance.

### Evaluation

- Student earned a C- or better in the transferred course, and at least 50% of the course grade was based on writing performance
- The transferred course goals are similar to Intermediate Writing Course Learning Outcomes:
  - Use writing to learn and synthesize new concepts
  - Formulate and express written ideas that are developed, logical, and organized
  - Compose written texts that are appropriate for a given audience, purpose, and context
  - Revise written work based on comments from the instructor o Find, evaluate, and use information effectively and ethically
  - Begin to use discipline-specific writing conventions
  - Demonstrate appropriate English language usage
  - Produce at least 16 pages of writing

### Review Procedure

Petitions are reviewed by the Writing Committee. Students within two semesters of graduation must use the Graduation Appeal process in place of the Intermediate Writing Course Exemption Appeal process. Notice of the decision is sent to the student s University of Montana email address.

# Undergraduate Nondegree Status < University of Montana

## Undergraduate Nondegree Status

An applicant who wishes to pursue studies for his or her personal growth and who does not wish to work toward a formal degree at the University of Montana-Missoula may apply as an undergraduate nondegree student. This option is not available to freshmen unless they are applying to the Missoula College. Each applicant should understand that acceptance to this category does not constitute acceptance into a degree granting program. Applicants admitted as undergraduate nondegree students are not eligible for financial aid.

### Academic Eligibility

Each applicant must certify on the application form that he or she has graduated from a high school that is fully accredited by its state department of education, or has passed the HiSET or General Educational Development (GED) test. To be considered for nondegree status, a student must have attempted 12 or more college level credits. This category is not open to students currently on academic suspension from The University of Montana.

If a person is admitted as an undergraduate non-degree student and later wishes to change to a degree program, he or she will be required to file an application for readmission, furnish the required supporting credentials and meet the regular admissions standards for the intended program. Readmission applications are available from Enrollment Services-Admissions, the Missoula College, or the Registrar's Office.

### How to Apply

Applications for admission are available from Enrollment Services-Admissions by request or are available on the UM Admissions website.

Receipt of the following credentials in Enrollment Services-Admissions or the Missoula College constitutes a complete application for admission to the undergraduate nondegree status:

1. Application form. Applications must complete and signed.
2. Application fee. The fee is \$30.00. This non-refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. An application cannot be considered prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and University of Montana-Western.
3. Immunization Form. All applicants are required to submit a completed Medical Requirement Form to the Curry Health Center two weeks prior to registration. The form must be complete, accurate and validated by a health official.

### When to Apply

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Applications and all required documents submitted by the following dates will receive priority consideration:

- March 1 - Autumn semester
- November 15 - Spring semester

Applications received after the priority dates are considered on a space-available basis.

# Advising

## Introduction

Academic advising is critical to student success at University of Montana (UM). All undergraduate students are required to meet with their advisor at least once each semester to review educational progress, discuss future plans, and secure schedule approval prior to registration. Additional meetings are recommended for information and guidance on dropping and/or adding courses, changing/declaring majors, exploring available resources, and ensuring that graduation requirements are met.

The UM catalog is the official source of information on the UM General Education Requirements, requirements of individual academic programs, and graduation-related policies. The Advising Manual is a comprehensive policy and procedural guide for faculty and staff advisors at UM.

Faculty and professional advisors, as well as peer advising assistants, facilitate positive academic advising experiences by:

- helping students to develop mentoring relationships with faculty and professionally trained staff
- encouraging students to fulfill their obligation to plan in advance for advising sessions
- educating students to understand and accept their responsibilities in the advising process and for advising decisions, and
- promoting open and productive dialogue about the student's academic, personal, and career goals.

## Advising Best Practices

No two advising sessions are ever the same. There are guidelines and best practices, however, that apply to most interactions between an advisor and advisee. These include:

- First, do no harm. Ask questions, double check information, and always document your interactions.
- Always reference a student's current academic record during an advising session. If you do not have access to printable student transcripts, access student records in Banner, Cyberbear, or Degree Works.
- Always maintain confidentiality. The student's academic record and all discussions (face-to-face, by phone or via email) between you and an advisee cannot be discussed with a third party unless you have the advisee's authorization. See the FERPA website maintained by the Registrar's Office link included in the Resources section of this document for detailed information on student confidentiality.
- Go beyond approving a class schedule and discuss the student's major choice, career or professional objectives, co-curricular opportunities and university resources. Help students make the most of their undergraduate experience at UM by connecting them with relevant resources and opportunities rather than simply making referrals.
- Advisors help students find the information they need to make good decisions and effectively advocate for themselves; advisors do not make decisions for the advisee.

- Use the available tools and resources to maximize the effectiveness of individual advising sessions with students. There are numerous technological and other tools available to advisors. Familiarize yourself with available tools by attending relevant training's.

## Minimum Expectations for the Advising Appointment

Advising numbers are distributed to academic departments 3-4 weeks prior to the Priority Registration period. Advising procedures and distribution of advising numbers vary widely among academic departments. At a minimum, the advising session should cover the following:

- Ask the student how they are doing and how their semester is going. Are they enjoying and performing well in their current courses? Are there additional support services they might benefit from? Based on student's responses and subsequent needs, provide student with available campus resources, encourage the student to utilize them, and, when possible, follow-up with the student to ensure that they have taken advantage of relevant resources. *Distributing the advising number shouldn't be the goal of advising.* Sometimes students are looking for the opportunity to discuss an issue but don't know how to start the conversation.
- Is the student's major a good fit and might a minor or second major be appropriate?
- Using Degree Works, conduct a comprehensive degree evaluation to inform student of progress towards degree completion (major requirements, GERs, Upper Division credits and general electives to meet the 120 credit requirement). Educate students on how they can access Degree Works to self-serve.
- Check to see if a student has registration-preventing and/or other holds, release advising pin, and notify student of when they can register for upcoming semester classes based on the priority registration timetable.
- Discuss the student's plans following graduation and encourage the student to take advantage of co-curricular or academic enrichment opportunities such as internships, service learning, undergraduate research, education abroad, etc. Also encourage the student to investigate federal student aid, scholarships and other higher education funding opportunities.
- At the end of the advising session with each student, summarize the main issues that surfaced in your advising interaction with the student, and ask them what their next steps are with respect to completing tasks and addressing issues pertaining to their academic progress.

## Expectations of Students: How to Prepare for the Advising Appointment

**Although academic advising is a relationship of shared responsibility between the advisor and the student, it is important for students to realize that the ultimate responsibility for meeting all graduation requirements is their own.** Students improve their academic planning and success by learning about the academic requirements of their academic program(s), UM policies on registration and graduation, and by fully using available advising services. In order to prepare for a productive advising appointment, students should:

- Develop a plan of courses for upcoming semester registration and be prepared to discuss your long-term academic, personal, and professional goals.

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- Login to the Cyberbear Student Profile to check for registration-preventing holds. If holds are present, try to clear them before the advising appointment.
- Research academic enrichment and other beyond-the-classroom opportunities of interest to discuss during the advising appointment.
- Be honest with your advisor about issues impacting your ability to be successful. Advisors can only help with issues or situations they are aware of. This requires open and effective communication with your advisor.

## Mountain Campus Students

When students indicate a major on their application form, it becomes their initial declared major.

Advisor information and assignment is done through the student's major department. If the student is undeclared, Pre-Medical Sciences, Pre-Nursing, Pre-Physical Therapy, freshman Media Arts, or an undergraduate Non-degree student, he/she is assigned to a professional advisor at the Undergraduate Advising Center ([www.umt.edu/uac](http://www.umt.edu/uac)).

To change a major, a student must contact the advisor of the major they wish to declare.

Students with academic advising questions or concerns may contact the Undergraduate Advising Center:

Lommasson Suite 269  
The University of Montana  
Missoula, MT 59812

Phone: (406) 243-2835  
Undergraduate Advising Center website: [www.umt.edu/uac](http://www.umt.edu/uac)

Email: [OfficeForStudentSuccess@umontana.edu](mailto:OfficeForStudentSuccess@umontana.edu)

## Missoula College Students

Students are assigned an academic advisor in their major program upon acceptance to the Missoula College.

Academic programs are identified by the major the student declared on their application for admission or by an official change of major communicated to the Registrar's Office by the program advisor.

For questions regarding assigned advisors or to change advisors, students can contact the Missoula College Academic Advising Center :

Missoula College UM, Room 202  
1205 E Broadway St  
Missoula, MT 59802

Phone: (406) 243-7925  
Academic Advising Center website: <http://mc.umt.edu/aac/>

Email: [academicadvisingcenter@umontana.edu](mailto:academicadvisingcenter@umontana.edu)

## Academic Support Services

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Several tutoring programs are available to all students through the Office for Student Success. STUDY JAM provides early evening group study tables in the UC Commons for selected courses (e.g., Chemistry, Biology, Physics, Spanish, Economics, and Statistics). The Writing and Public Speaking Center supports students in becoming more effective writers and provides tutoring at several locations across campus; 406-243-2266). The Math Learning Center provides tutoring in all developmental and 100-level math courses. Missoula College students may receive tutoring in math, writing and a variety of other subjects through the Academic Support Center. The Curry Health Center Counseling Center offers workshops on a variety of topics designed to enhance student academic performance.

### **TRIO Student Support Services**

TRIO SSS is a federally funded program offering support services to students who are first-generation, (neither parent completed a four-year degree) low-income or receiving a Pell grant, or a student with disabilities. TRIO's mission is to provide all-around support such as advising, study skills class, career and college success class, peer mentoring, tutoring, book loan program, and more! To qualify, a student may complete an on-line application or contact our office to pick one up. (neither parent has completed a four-year degree, financial need based on income (Pell grant eligible), or a student with a disability).

For more information, visit TRIO at Lommasson Center 154, call 406-243-5032, or visit the TRIO website.

### **Missoula College Learning Center**

The Missoula College Learning Center offers a variety of services to facilitate students' academic success. The Learning Center (LC) hosts tutoring for writing, math, accounting, computers, anatomy, and other subjects. Skills assessments, accommodated test services and make-up testing are also offered. Students can receive help with the various online student services such as email, online labs, and Cyberbear. For information related to these services, contact the Learning Center at 243-7826 or visit the Learning Center website.

# Degree/Certificate Requirements for Graduation

## Catalog Governing Graduation

Students may graduate fulfilling University and departmental major requirements in any single University of Montana-Missoula catalog under which the student has been enrolled during the six years prior to graduation. (For example, the 2014-2015 catalog can be used through summer 2021). The student **MUST** meet major requirements under the same catalog under which the student is meeting University requirements (general education requirements); minor requirements may be satisfied under a different catalog within the six year period. University or departmental requirements may change to comply with accreditation requirements, professional certification and licensing requirements, etc.

Students transferring to the University of Montana-Missoula may choose to graduate fulfilling requirements under the UM catalog in effect when they were enrolled at their original institution, provided the chosen catalog is not more than six years old at the time of graduation. Eligible students who choose an earlier catalog must notify the Admissions Office at the time of admission so their transfer work can be evaluated accordingly.

## Applying for Certificate and Degree Candidacy

To become a candidate for a degree, the student must file formal application with the Registrar's Office at the beginning of the semester preceding the semester in which the student expects to graduate. Deadline dates are specified on the Registrar's Office website.

## Credits Required for a Certificate of Completion

See individual College or School catalog sections for certificate course and credit requirements. Course and credit requirements vary by program.

## Credits Required for a Degree

### Associate of Applied Science

To receive an Associate of Applied Science (A.A.S.) Degree from the Missoula College, a student must fulfill the following criteria:

1. Complete a minimum of 60 credits, of which 51% must be from UM. Possess a minimum grade average of 2.00 in all work attempted at the University of Montana-Missoula and a minimum grade of C- in all classes that count toward program requirements.
2. Courses numbered below 100 do not count toward the 60 credit requirement, but do fulfill financial aid credit load requirements.
3. Complete the specialized program degree requirements including the following related subject area of core collegiate-level courses:



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1. **Communication:** the ability to formulate and adapt messages to a variety of audiences through written, verbal, and nonverbal processes.
2. **Computation:** the ability to complete basic algebraic manipulations and achieve mathematical literacy.
3. **Human Relations:** the ability to analyze social problems and structure, ethical norms of professions and society, human behavior, or human values systems.
4. **Computer Literacy:** the ability to utilize a modern computing system including web applications and an office productivity suite to research, develop and produce information in a 21st century society.
5. **Professional Competency:** To ensure all graduates the opportunity to apply specialized skills in a professional environment, it is recommended student complete a program-related internship, field experience, clinical experience, capstone project, or professional certification activity.

## Associate of Arts

A total of 60 credits is required for graduation with an Associate of Arts (A.A.) degree. The minimum grade average for graduation is 2.00 in courses taken on the traditional letter grade (A-F) basis. To receive an Associate of Arts degree all students must complete successfully all the general education requirements for a baccalaureate degree.

## Bachelor Degrees

A minimum total of 120 credits is required for graduation with a bachelor degree in most academic programs offered by the University of Montana. A greater number is required in some specific programs; students should consult the appropriate catalog section for their program of interest and discuss their plans with an academic advisor.

Students may elect to earn more than one degree or major at the bachelor level. Available options include a double major or dual degree :

- A double major is awarded as one degree with one diploma that may list two or more majors. The graduating student with multiple majors must fulfill the curricular requirements for two or more majors as well as all other requirements for graduation. Two majors will normally be within a single classification of bachelor s degree (e.g. Bachelor of Sciences). Alternatively, the student may fulfill requirements for two majors across degree classes. In this case the student must declare a primary major that determines the type of degree awarded (BS, BA, etc.) that will be printed on the student s diploma and transcript. The secondary major shall be annotated on the student transcript as completed.
- A dual degree is awarded as two degrees with two diplomas (e.g. Bachelor Sciences and a Bachelor of Arts). The student must fulfill all of the program requirements for each of the separate bachelor degrees and must comply with the Residency Requirements for Degrees/Certificates (below) for each degree. The two, dual (or multiple) degrees may be earned concurrently or at different times but all dual degree graduates must complete a minimum of 150 credits by completing an additional 30 credits for each subsequent bachelor degree. However, note that academic residency requirements apply differently for University of Montana graduates versus non-graduates seeking dual or subsequent degrees, so the requirements may differ.

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General education requirements need only be met once for either a double major or dual degree.

### Upper-Division Requirement

All students must complete a minimum of 39 credits in courses numbered 300 and above to meet graduation requirements for the first baccalaureate degree. Upper division credits transferred from other four year institutions will count toward the 39 credit requirement.

Lower-division transfer courses accepted as substitutes for upper-division courses required for a particular major will not count toward the university's 39 upper-division credit requirement.

### Residency Requirements for Degrees/Certificates

University of Montana credit is the credit earned in any course which has been approved to be listed in the University of Montana-Missoula catalog and which has been approved for offering by the department chair and dean of the school or college in which the course is taught. University of Montana-Missoula credit may be offered at any location.

#### Requirements for Certificates and Associate of Applied Science Degrees

A minimum of 51% of the required number of credits must be earned from the University of Montana-Missoula.

#### Requirements for the Associate of Arts Degree

A minimum of 30 credits of the required number must be earned from the University of Montana-Missoula.

#### Requirements for the First Bachelor Degree

A first bachelor degree is defined as any bachelor degree earned by a student who has not previously earned a bachelor degree from the University of Montana-Missoula. Thus, the requirements below also apply to any student who previously earned a bachelor degree at another institution and now is seeking a bachelor degree from the University of Montana-Missoula.

1. A minimum of 30 credits of the required number must be earned from the University of Montana-Missoula.
2. A minimum of 30 credits of the required number must be earned in study on the University of Montana-Missoula campus.
3. Of the last 45 credits required for the degree, at least 30 of these must be earned from the University of Montana-Missoula. Students attending elsewhere on a University approved exchange may be exempt from this requirement with the prior written approval of their major department chair or dean.

### Requirements for the Second Bachelor Degree

In regard to residency requirements, a second bachelor degree is defined as any bachelor degree earned by a student who previously had earned a bachelor degree from the University of Montana-Missoula; they have met first degree residency requirements and need only do so once. Students seeking a second bachelor degree or dual degree from the University of Montana must complete all academic requirements for each

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degree (first and subsequent) and earn a minimum of 150 credits by completing an additional 30 credits for each subsequent bachelor degree. For students who have met first degree residency requirements, a minimum of 20 credits of the required additional 30 credits must be earned in study on the University of Montana-Missoula campus.

Students attending the University of Montana who are not University of Montana graduates, but already have a bachelor degree from another institution must meet University of Montana residency Requirements for The First Bachelor Degree (above) for the subsequent degree that they are now seeking. This will require at least 30 additional credits of course work to be earned from the University of Montana-Missoula campus with 30 of the last 45 credits earned from University of Montana-Missoula. Students attending elsewhere on a University approved exchange may be exempt from this requirement with the prior written approval of their major department chair or dean.

### Transcription of double majors and dual degrees

All majors, minors, degrees and certificates earned from the University of Montana shall be clearly and specifically listed on official transcripts under a single degree or as separate dual/multiple degrees, as appropriate.

## Credit Maximums

The amount of credit which may be counted toward the minimum credit requirements for the bachelor (B.A./B.S.), associate of science (A.S.), and associate of arts (A.A.) degrees is limited in certain areas follows:

		Credits maximums
<b>CATEGORY</b>	<b>FOR BACHELOR DEGREE</b>	<b>FOR AA OR AS DEGREE</b>
Technical courses (course number suffix of 'T') - up to 15 technical course credits can be applied toward the minimum credit requirement for all students, except up to 20 technical course credits can be applied to the minimum course credits for students with an earned A.A.S. degree.	15-20	15-20
Career skills	0	0
Study skills courses (e.g. AASC 101, C&I 160)	2	2
Physical education and activity/skills courses (e.g. DANC 325, ACT 101-ACT 287, ACTV, MART 100, MSL 106 and MSL 203)	4	4
Military Science Leadership Courses (contracted students may present 24 credits)	12	12
Music performance (MUSI 102A, MUSI 123A, MUSI 135A, MUSI 136A, MUSI 235, MUSI 236, MUSI 218)	6	6
Ensemble music (MUSI 112A, MUSI 114A, MUSI 110A, MUSI 131A and MUSI 122A)	8	8
Credit/No Credit credits	18	18
Internship credits in 198/298/398/498	6	6

Credits attempted in these areas which are beyond the maximum applicable will remain on the students' permanent record but cannot be used toward graduation.

## Grade Average Requirement

A minimum grade average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation.

## Graduation with Honors or High Honors

Graduates may be awarded honors with their certificates, associate, and bachelor degrees based on their cumulative University of Montana-Missoula (UM) Grade point average (GPA).

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Consistent with Board of Regents policy, the UM GPA shall be computed by dividing the sum of grade points earned by the total credits carried, except that neither the credits nor the grade points shall be counted for a. non-credit, remedial, developmental, or other sub college-level courses; b. courses taken on a credit/no credit basis (pass/fail, etc.); or, c. transferred coursework. To be eligible for graduation with honors, at least 50% of the credits required for the certificate or degree must be credits eligible to count towards the student's UM GPA.

### **Graduation cum laude (*with honors*), magna cum laude (*high honors*) or summa cum laude (*highest honors*)**

Each semester the registrar shall distribute a list of graduation candidates with a UM GPA that meets or exceeds 3.40. Faculty Senate shall award honors as:

1. Cum laude (*Honors*): All undergraduate students shall graduate *cum laude (with honors)* when their cumulative UM GPA meets or exceeds 3.40.
2. Magna cum laude (*High Honors*): Departments and programs may stipulate additional requirements and then recommend students for graduation magna cum laude (*high honors*) when the cumulative UM GPA meets or exceeds 3.70.
3. Summa cum laude (*Highest Honors*): Departments and programs may stipulate additional requirements and then recommend students for graduation summa cum laude (*with highest honors*) when their UM GPA meets or exceeds 3.90.

# General Education Requirements

## Preamble

The University of Montana-Missoula's General Education Program provides a broad academic base that supports both undergraduate learning at the University of Montana-Missoula and continued learning following graduation. While the General Education Program offers students considerable flexibility in selecting courses, it has a set of common educational objectives for all students.

In accordance with the mission of the University of Montana-Missoula, these objectives are to develop competent and humane individuals who are informed, ethical, literate, and engaged citizens of local and global communities. Students should become acquainted with issues facing contemporary society, participate in the creative arts, develop an understanding of science and technology, cultivate an appreciation of the humanities, and examine the history of different American and global cultures. Upon completion of the general education requirements students should be able to articulate ideas orally and in writing, understand and critically evaluate tangible and abstract concepts, and employ mathematical and other related skills appropriate to a technologically focused society.

In summary, the General Education Program is designed to provide a high quality intellectual foundation that accommodates all UM students whether in liberal arts or professional programs. This foundation will be reinforced, expanded, and refined as students continue through their course of study. Students are encouraged to prepare for productive roles in their chosen fields by cultivating civic awareness vital to the greater community and a democratic society. The acquired skills will allow students to examine critically the human experience and achieve genuine confidence in their knowledge and abilities. For the General Education Program to accomplish its goals, students must assume primary responsibility for their growth and education.

## General Education Requirements

### Overview

To earn a baccalaureate degree, all students must complete successfully, in addition to any other requirements, the following General Education Requirements. Students who have completed an approved lower-division general education program at an approved Montana institution of higher education should refer to the catalog section on General Education for Transfer Students.

All General Education courses must be at least 3 credits, must be introductory and foundational, and have no more than one pre-requisite. The General Education Committee may allow exceptions for upper-division courses, courses fewer than three credits, and for courses with more than one pre-requisite, if the proposing unit can justify such an exception.

Some courses may satisfy both the "Writing Course" requirement (1.2) and one of the Groups IV through XI.

Some courses may satisfy both Group IX and one of the Groups IV through VIII.

Some courses may satisfy both Group X and one of the Groups IV through VIII. No course may satisfy both Group IX and Group X.

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Many of the general education courses listed below require prerequisites be met before registration. The prerequisites are listed in the individual course descriptions.

**NOTE! \*\*\*All courses taken to satisfy General Education Requirements must be taken for a traditional letter grade and must be passed with a grade of C- or better\*\*\*.**

Students are cautioned that approved courses may change from year to year. To be used for General Education credit, a course must be listed as approved in the Class Schedule for the semester a student registers for it.

	Group Letter and Description
<b>GROUP LETTER AND DESCRIPTION</b>	<b>CREDITS</b>
Group I: English Writing Skills	
1. Composition course WRIT 101 or 201 (ENEX 101, WTS 101, ENEX 200) or an equivalent	3
2. One designated Writing Course	1-3
3. Upper-Division Writing Requirement	3
Group II: Mathematics	3
Group III: Modern and Classical Languages - successful completion of a second semester language (test out provisions apply). Some majors have been granted exceptions to the Modern and Classical Language requirement. The majors are listed below.	0-11
Group IV: Expressive Arts	3
Group V: Literary and Artistic Studies	3
Group VI: Historical Studies	3
Group VII: Social Sciences	3
Group VIII: Ethics and Human Values	3
Group IX: Democracy and Citizenship	3
Group X: Cultural & International Diversity	3
Group XI: Natural Sciences - One Natural Science course must include a laboratory experience.	6

Some courses satisfy more than one group (see list at the end of this section).
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### Courses that Satisfy More than One Group

TITLE	GENERAL EDUCATION GROUPS
AAST 141H Black: From Africa to Hip-Hop	Historical Studies, Cultural Intl Diversity (X)
ANTY 101H Anthro the Human Experience	Historical Studies, Cultural Intl Diversity (X)
ANTY 102H Intro to South S. East Asia	Historical Studies, Cultural Intl Diversity (X)
ANTY 103H Intro Latin American Studies	Historical Studies, Cultural Intl Diversity (X)
ANTY 122S Race and Minorities	Social Sciences Course (S), Democracy and Citizenship (Y)
ANTY 141H The Silk Road	Historical Studies, Cultural Intl Diversity (X)
ANTY 220S Culture Society	Social Sciences Course (S), Cultural Intl Diversity (X)
ANTY 241H Central Asian Culture and Civ	Historical Studies, Cultural Intl Diversity (X)
ANTY 254X Arch Wonders of the World	Cultural Intl Diversity (X), Writing Course-Intermediate,
ANTY 351H Archaeology of North America	Historical Studies, Cultural Intl Diversity (X)
ARTH 150H Introduction to Art History	Historical Studies, Cultural Intl Diversity (X)
ARTH 200H Art of World Civilization I	Historical Studies, Cultural Intl Diversity (X)
ARTH 250L Introduction to Art Criticism	Lit Artistic Studies (L), Writing Course-Intermediate
BIOB 210N Communicating Biology	Natural Science Course (N), Writing Course-Intermediate
CHMY 305E Ethics, Literature and Writing in the Sciences	Ethical Human Values Course, Writing Course-Advanced
CLAS 180H Env Nat in Classical World	Historical Studies, Writing Course-Intermediate
CLAS 251L The Epic	Lit Artistic Studies (L), Writing Course-Intermediate



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CLAS 252L Greek Drama: Politics on Stage	Lit Artistic Studies (L), Writing Course-Intermediate
COMX 140L Introduction to Visual Rhetoric	Lit Artistic Studies (L), Democracy and Citizenship (Y)
CSCI 215E Social Ethical Issues in CS	Ethical Human Values Course, Writing Course-Intermediate
CSCI 315E Computers, Ethics, and Society	Ethical Human Values Course, Writing Course-Advanced
DANC 360L World Dance	Lit Artistic Studies (L), Cultural Intl Diversity (X)
ENST 225S Sustainable Communities	Social Sciences Course (S), Democracy and Citizenship (Y)
ENST 231H Nature and Society	Historical Studies, Writing Course-Intermediate
ENST 335L The Environmental Vision	Lit Artistic Studies (L), Writing Course-Advanced
GH 151L Introduction to Western Humanities Antiquity	Lit Artistic Studies (L), Writing Course-Intermediate
GPHY 121S Human Geography	Social Sciences Course (S), Cultural Intl Diversity (X)
GPHY 141S Geography of World Regions	Social Sciences Course (S), Cultural Intl Diversity (X)
GRMN 351H German Culture: Beginnings to Romanticism	Historical Studies, Writing Course-Advanced
GRMN 352H Germ Culture: Romanticism to the Present	Historical Studies, Writing Course-Advanced
HONR 121L Ways of Knowing	Lit Artistic Studies (L), Writing Course-Intermediate
HONR 122E Ways of Knowing II	Ethical Human Values Course, Democracy and Citizenship (Y)
HSTA 101H American History I	Historical Studies, Democracy and Citizenship (Y)
HSTA 102H American History II	Historical Studies, Democracy and Citizenship (Y)
HSTA 103H Honors American History I	Historical Studies, Democracy and Citizenship (Y)
HSTA 104H Honors American History II	Historical Studies, Democracy and Citizenship (Y)
HSTA 150H The Veteran's Experience	Historical Studies, Democracy and Citizenship (Y)

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HSTA 201E History of American Democracy	Ethical Human Values Course, Democracy and Citizenship (Y)
HSTR 101H Western Civilization I	Historical Studies, Democracy and Citizenship (Y)
HSTR 102H Western Civilization II	Historical Studies, Democracy and Citizenship (Y)
HSTR 103H Honors Western Civilization I	Historical Studies, Democracy and Citizenship (Y)
HSTR 104H Honors Western Civilization II	Historical Studies, Democracy and Citizenship (Y)
HSTR 210E History of the Bible	Ethical Human Values Course (E), Lit & Artistic Studies (L)
HSTR 211L Early Christianity	Lit & Artistic Studies (L), Ethical Human Values Course (E)
HSTR 230H Colonial Latin America	Historical Studies, Cultural Intl Diversity (X)
HSTR 231H Modern Latin America	Historical Studies, Cultural Intl Diversity (X)
HSTR 240H East Asian Civilizations	Historical Studies, Cultural Intl Diversity (X)
JPNS 150H Japanese Cult Civiliz	Historical Studies, Cultural Intl Diversity (X)
JPNS 312: Japanese Literature: Medieval to Modern	Lit & Artistic Studies (L), Writing Course-Advanced
JRNL 100H Media History and Literacy	Historical Studies, Democracy and Citizenship (Y)
LING 375X Linguistic Ecology and Language Endangerment	Writing Course-Intermediate, Cultural Intl Diversity (X)
LIT 110L Intro to Lit	Lit Artistic Studies (L), Writing Course-Intermediate
LIT 120L Poetry	Lit Artistic Studies (L), Writing Course-Intermediate
LIT 236L Literary Histories	Lit Artistic Studies (L), Writing Course-Intermediate
LIT 246L Genres, Themes, Approaches	Lit Artistic Studies (L), Writing Course-Intermediate
LIT 353L Milton	Lit Artistic Studies (L), Writing Course-Advanced
MUSI 301H Music History I	Historical Studies, Democracy and Citizenship (Y)
MUSI 302H Music History II	Historical Studies, Writing Course-Intermediate, Democracy and Citizenship (Y)

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NASX 105H Intro Native Amer Studies	Historical Studies, Cultural Intl Diversity (X)
NASX 235X Oral/Written Trads Native Amer	Lit Artistic Studies (L), Writing Course-Intermediate, Cultural Intl Diversity (X)
NASX 304E Native American Beliefs/Philos	Ethical Human Values Course, Cultural Intl Diversity (X)
PHL 114E Introduction to Political Ethics	Ethical & Human Values Course, Democracy and Citizenship (Y)
PHL 210E Moral Philosophy	Ethical Human Values Course, Writing Course-Intermediate
PHL 241N Hist Philosophy of Science	Historical Studies, Natural Science Course (N)
PHL 317E Law and Morality	Ethical Human Values Course, Democracy and Citizenship (Y)
PHL 319E Law and Discrimination	Ethical Human Values Course, Democracy and Citizenship (Y), Cultural Intl Diversity (X)
PSCI 210S Intro to American Government	Social Sciences Course (S), Democracy and Citizenship (Y)
PSCI 220S Intro to Comparative Government	Social Sciences Course (S), Democracy and Citizenship (Y)
RLST 234X Hindu Religious Traditions	Historical Studies, Cultural Intl Diversity (X)
RUSS 105Y Intro to Russian Culture	Democracy and Citizenship (Y), Cultural Intl Diversity (X)
SOCI 220S Race, Gender Class	Social Sciences Course (S), Democracy and Citizenship (Y)
SSEA 202X Introduction to India	Cultural Intl Diversity (X), Historical Studies
THTR 330H Theatre History I	Historical Studies, Writing Course-Intermediate
WRIT 201 College Writing II	Writing Course-Intermediate, Writing Course-Introductory

### Group I: English Writing Skills

Students must satisfy the following three requirements in order:

1. Introductory College Writing;
2. Intermediate College Writing;

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## 3. Advanced College Writing

### **Introductory College Writing**

Students must complete WRIT 101, WRIT 201, or an equivalent composition course with a grade of C-minus or better. Students with Language and Composition AP scores of 4 or better are exempted from this requirement.

Entering students who are placed into WRIT 095, based on their standardized test scores, must successfully complete WRIT 095 prior to enrolling in WRIT 101 or WRIT 201. Such students may challenge their placement with specific scores from the University Writing Assessment. Entering students who place into WRIT 201 may choose to take WRIT 101 instead.

### **Intermediate and Advanced College Writing**

To fulfill the General Education requirements for college writing students must pass one Intermediate College Writing course with a grade of C-minus or better and also one Advanced College Writing course with a grade of C-minus or better (in this order, if possible). Students may not use the same writing course to meet both the Intermediate College Writing and the Advanced College Writing requirement. The courses satisfying the Advanced College Writing requirement differ according to the student's major. Students should examine the course catalog for the specific courses that fulfill the writing requirements and consult with their advisor. The courses satisfying either the intermediate or the advanced writing requirements are listed in separate course catalog tables below.

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### **Intermediate Writing Courses**

The following courses are designated as Intermediate Writing Courses for this catalog year. Students are cautioned that courses may change from year to year. To be used for General Education, a course must be listed as Intermediate Writing in the catalog and in the Class Schedule for the semester a student registers for it.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
ANTY 254X	Arch Wonders of the World	3
ANTY 310	Human Variation	3
ARTH 250L	Introduction to Art Criticism	3
ARTH 425	Art of the Renaissance	3
BIOB 210N	Communicating Biology	3
BMGT 205	Professional Business Comm	3
BMGT 212	Critical Analysis for Business	3
C&I 287	Business Communications	3
CLAS 180H	Env & Nat in Classical World	3

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CLAS 251L	The Epic	3
CLAS 252L	Greek Drama: Politics on Stage	3
CSCI 108	Interdisciplinary Computing: Practical Computational Problem Solving	3
CSCI 215E	Social & Ethical Issues in CS	3
ENST 201	Environmental Info Resources	3
ENST 231H	Nature and Society	3
FILM 320	Shakespeare and Film	3
GH 151L	Introduction to Western Humanities Antiquity	3
GH 152	Introduction to the Humanities Medieval to Modern	3
HONR 121L	Ways of Knowing	3
HSTA 326	Digital Worlds of Early America	3
HSTA 373	The History of American Thought to 1865	3
HSTA 347	Voodoo, Muslim, Church: Black Religion	3
HSTA 385	Families & Children in America	3
HSTA 391	Special Topics (Digital Worlds of Early America - one time only spring 2021)	3
HSTR 300	Writing For History	3
HSTR 334	Latin America: Reform & Revolution	3
HSTR 401	The Great Historians	3
IRSH 380	Topics in Irish Studies	3
IRSH 381	Irish Women's Writing	3
IRSH 382	Rockin' Rebels: Popular Irish Music from Traditional to Punk	3
JRNL 270	Reporting	3
LING 375X	Linguistic Ecology and Language Endangerment	3
LIT 110L	Intro to Lit	3

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LIT 120L	Poetry	3
LIT 236L	Literary Histories	3
LIT 246L	Genres, Themes, Approaches	3
MART 300	Visions of Film	3
MUSI 302H	Music History II	3
NASX 235X	Oral/Written Trads Native Amer	3
NASX 280	NA Studies Rsrch Theors/Mthds	3
NRSM 200	Nat.Resource Professional Wrtg	3
PHL 210E	Moral Philosophy	3
SOCI 306	Sociology of Work	3
THTR 330H	Theatre History I	3
WRIT 121	Intro to Technical Writing	3
WRIT 201	College Writing II	3
WRIT 325	Science Writing	3

**Advanced Writing Courses**

The following courses are designated as Advanced Writing Courses for this catalog year. Students should consult with their advisor regarding the requirement specified by their major.

CODE	TITLE	HOURS
AHAT 342	Therapeutic Interventions	2
ANTY 402	Quan Ethnographic Field Methds	3
ANTY 408	Advanced Anthro Statistics	3
ANTY 430	Social Anthropology	3
ANTY 431	Ethnographic Field Methods	3
ANTY 450	Archaeological Theory	3
ANTY 455	Artifact Analysis	3

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ARTH 350	Contemp Art and Art Criticism	3
ARTH 434	Latin American Art	3
BGEN 499	Strategic Management	3
BIOH 458	Neuroscience Research	4
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3
CHMY 305E	Ethics, Literature and Writing in the Sciences	3
CLAS 399	Capstone	3
COMX 347	Rhetoric, Nature, and Environmentalism	3
COMX 413	Communication and Conflict-Writing	3
COMX 414	Communication in Personal Relationships	3
COMX 421	Communication in Nonprofit Organizations	3
COMX 422	Communication and Technology	3
COMX 424	Risk, Crisis, and Communication	3
COMX 445	Rhetorical Criticism and Theory	3
COMX 447	Rhetorical Construction of Women	3
CSCI 315E	Computers, Ethics, and Society	3
CSCI 499	Senior Thesis/Capstone	1-6
CSD 430	Senior Capstone	3
DANC 494	Junior/Senior Seminar	3
ECNS 481	Communicating Economics	3
ECNS 488	Res Meth & Thesis Design	2
ECNS 499	Senior Thesis/Capstone	2
EDU 339	Teaching & Assessing PK-8 Lang Arts	3

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ENST 335L	The Environmental Vision	3
ENST 367	Environmental Politics & Policies	3
ENST 382	Environmental Law	3
ENST 487	Globalization, Justice & Environment	3
GEO 320	Global Water	4
GEO 499	Senior Thesis /Capstone	3-10
GH 484	Novel Ancient and Modern	3
GPHY 335	Water Policy	3
GPHY 433	Community Resilience	3
GPHY 499	Senior Thesis	3
GRMN 351H	German Culture: Beginnings to Romanticism	3
GRMN 352H	Germ Culture: Romanticism to the Present	3
HEE 301	Meth of Secondary HE	3
HSTA 405	Public Problems & US Democracy	3
HSTA 415	The Black Radical Tradition	3
HSTA 417	Prayer & Civil Rights	3
HSTA 427	Freedom, Slavery, Equality	3
HSTA 461	Research in Montana History	3
HSTA 471	Writing Women's Lives	3
HSTR 400	Historical Research Seminar	3
HSTR 418	Britain 1500 - 1800	3
HSTR 437	US-Latin America Relations	3
JPNS 312	Jpns Lit Medieval to Mod	3
JRNL 340	Intermediate Audio	3



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JRNL 352	Intermediate Video Reporting and Producing	3
JRNL 362	Feature Writing	3
JRNL 370	Public Affairs Reporting	3
KIN 447	Analytical & Communicative Techniques	3
LING 473	Language and Culture	3
LING 484	NA Indigenous Lang & Ling	3
LIT 300	Literary Criticism	3
LIT 304	U.S. Writers of Color	3
LIT 314	The American Novel	3
LIT 327	Shakespeare	3
LIT 342	Montana Writers	3
LIT 343	African American Lit	3
LIT 353L	Milton	3
LIT 376	Lit & Other Disciplines	3
LIT 494	Seminar: Lit Capstone	3
M 429	History of Mathematics	3
M 499	Senior Thesis	1-12
MART 450	Topics in Film/Media Studies	3
MCLG 315	Major Hispanic Authors	3
MUSI 415	Music 20th Century to Present	3
MUSI 416	Topics in Music History	3
MUSI 417	Cultural Studies in Music	3
NASX 494	Seminar/Workshop	3
NRSM 465	Foundations of Restoration Ecology	3

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PHAR 350 and PHAR 550	Drug Info and Drug Literature Eval	1 3
PHL 499	Senior Seminar	3
PHSX 330	Communicating Physics	3
PSCI 400	Adv Writing in Pol Science	1
PSYX 320	Advanced Psychological Research Methods	3
PSYX 400	History & System in Psychology	3
PTRM 451	Tourism & Sustainability	3
PTRM 482	Wilderness & Protected Area Management	3
RUSS 494	Seminar in Russian Studies	1-3
SOCI 438	Seminar in Crime & Deviance	3
SOCI 441	Capstone: Inequal and Soc Just	3
SOCI 488	Writing for Sociology	3
S W 300	Hum Behav & Soc Environ	3
THTR 331	Theatre History II	3
WGSS 363	Feminist Theory and Methods	3
WILD 408	Advanced Fisheries	3
WILD 470	Conserv of Wildlife Populatns	4

## Group II Mathematics

Mathematical literacy implies an appreciation of the beauty of mathematics, an ability to apply mathematical reasoning, and an understanding of how mathematics and statistics are used in many arenas. Mathematical literacy may be attained through the study of the properties of numbers, mathematical modeling, geometry, data analysis and probability, with the overarching goal of learning mathematical reasoning and problem solving.

Mathematical literacy cannot be achieved in a single course. However, for the purposes of general education, the mathematical literacy requirement can be met by any one of the following:

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1. Achieving a grade of C- or better in one of the following courses that address different aspects of mathematical literacy or a mathematics course of 3 or more credits for which one of these is a prerequisite:

CODE	TITLE	HOURS
M 104	Numbers as News	3
M 105	Contemporary Mathematics	3
M 115	Probability and Linear Mathematics	3
M 118	118 Mathematics for Music Enthusiasts	3
M 121	College Algebra	3
M 122	College Trigonometry	3
M 132	Numbers and Operations for Elementary School Teachers	3
M 151	Precalculus	4
M 162	Applied Calculus	4
M 171	Calculus I	4
M 181	Honors Calculus I	4
STAT 216	Introduction to Statistics	4

2. Achieving a score of 50 or better on the CLEP College Algebra Test, the CLEP College Precalculus Test, or the CLEP College Mathematics Test.
3. Passing the Mathematical Literacy Examination administered by the Department of Mathematical Sciences. To qualify to take the Mathematical Literacy Examination, a student must have achieved a score of 630 or better on the SAT Math exam or a score of 28 or better on the ACT Math exam. A student may take the Mathematical Literacy Examination only once. Further details are available from the Department of Mathematical Sciences.

Students must complete the mathematical literacy requirement by the time they have earned 30 credits; if not, they must register for a mathematical sciences course every semester until they have completed the requirement. Because many other courses at the university assume some mathematical literacy, it is strongly recommended that all students complete their mathematical literacy requirement as soon as possible.

Upon completion of the mathematical literacy requirement, a student will be able to effectively apply mathematical or statistical reasoning to a variety of applied or theoretical problems.

## Group III: Modern and Classical Languages

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The study of language is a core component of a liberal arts education. Students must complete the first-year sequence of a language or demonstrate comparable proficiency to fulfill the General Education language requirement (test-out provisions apply).

The language requirement can be met in any of the following ways:

1. by achieving a C- or better in a second-semester language course offered at the University of Montana (see list of courses below);
2. by achieving a grade of C- or better in a language course numbered 201 or above at the University of Montana (see list of courses below);
3. by presenting a transcript record of completion with a grade of C- or better of a second- semester (or more advanced) language course at an accredited college or university;
4. by achieving an appropriate score on a placement exam administered by the offering department;
5. by receiving verification of an appropriate level of proficiency in any other natural language in collaboration with the department of World Languages and Cultures. Note that the student's native language, if it is not English, can be used to fulfill this requirement.

Upon completion of the Modern and Classical Languages requirement, the student will have a basic functional knowledge of a second natural language sufficient to:

- read and write if the language is classical, such as Latin or classical Greek;
- speak and aurally comprehend, if the language does not have a written tradition, such as Salish;
- perform all four skills (speaking, aural comprehension, reading, and writing) if the language is modern and has a written tradition, such as Japanese or French;
- demonstrate both receptive (visual comprehension) and expressive (manual production) proficiency if the language is American Sign Language.

The courses listed below require prerequisites be met before registration. The prerequisites for the following courses are listed in the individual course descriptions.

CODE	TITLE	HOURS
<b>ARABIC</b>		
Select one of the following:		3-5
ARAB 102	Elementary Modern Standard Arabic II	
ARAB 201	Intermediate Modern Standard Arabic I	
ARAB 202	Intermediate Modern Standard Arabic II	
ARAB 301	Adv Modern Standard Arabic I	
ARAB 302	Adv Modern Standard Arabic II	

<b>CHINESE</b>		
Select one of the following:		3-5
CHIN 102	Elementary Chinese II	
CHIN 201	Intermediate Chinese I	
CHIN 202	Intermediate Chinese II	
CHIN 301	Advanced Chinese I	
<b>FRENCH</b>		
Select one of the following:		3-4
FRCH 102	Elementary French II	
FRCH 201	Intermediate French I	
FRCH 202	Intermediate French II	
FRCH 301	Adv Grammar/Oral Writ Exprsn	
<b>GERMAN</b>		
Select one of the following:		3-4
GRMN 102	Elementary German II	
GRMN 201	Intermediate German I	
GRMN 202	Intermediate German II	
GRMN 301	German: Oral and Written Expression I	
GRMN 302	German Oral & Written Expression II	
<b>GREEK</b>		
Select one of the following:		3
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	

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<b>HINDI</b>		
SSEA 191	Elementary Hindi II	5
<b>IRISH</b>		
Select one of the following:		4
IRSH 102		
IRSH 201		
IRSH 202		
<b>ITALIAN</b>		
ITLN 102	Elementary Italian II	4
<b>JAPANESE</b>		
Select one of the following:		4-5
JPNS 102	Elementary Japanese II	
JPNS 201	Intermediate Japanese I	
JPNS 202	Intermediate Japanese II	
JPNS 301	Advanced Japanese	
JPNS 302	Advanced Japanese	
<b>LATIN</b>		
Select one of the following:		3
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
<b>BLACKFOOT</b>		
NASX 142	Elementary Blackfoot II	4
<b>RUSSIAN</b>		

Select one of the following:		3-4
RUSS 102	Elementary Russian II	
RUSS 201	Intermediate Russian I	
RUSS 202	Intermediate Russian II	
RUSS 301	Russian: Oral & Written Expr I	
RUSS 302	Russian: Oral and Writen Expr II	
<b>AMERICAN SIGN LANGUAGE</b>		
SIGN 201	Intermediate American Sign Language	
<b>SPANISH</b>		
Select one of the following:		3-4
SPNS 102	Elementary Spanish II	
SPNS 201	Intermediate Spanish I	
SPNS 202	Intermediate Spanish II	
SPNS 301	Spanish: Oral and Written Expr	

- Students may satisfy the requirement by demonstrating equivalent skill in any of these or other languages in testing administered by the Department of World Languages and Cultures.
- International students from non-English-speaking countries may satisfy this requirement by presenting a TOEFL score of 580 or greater.

### Group III: Exceptions to the Modern and Classical Language Requirement

The extended majors listed below have been granted exceptions to the Modern and Classical Language requirement. Students graduating in any one of these majors are not required to complete the Modern and Classical Language requirement. Students graduating with an Associate of Arts degree have also been granted an exception to the Group III requirements. Missoula College students who continue to Mountain Campus without graduating will need to complete Group III unless their declared four-year major has been granted an exception.

Accounting & Finance, Art (Bachelor of Fine Arts only; BA students must complete the language requirement), BAS Applied Arts and Science, Biochemistry, Biology, Chemistry, Computer Science, Curriculum & Instruction, Ecosystem Science & Restoration, Forestry, Geoscience, Integrative Physiology, Management Information Systems, Management & Marketing, Mathematics or combined Mathematics /Computer Science or Computer Science/Mathematics, Media Arts (Bachelor of Fine Arts only; BA students must complete the language requirement), Medical Laboratory Science, Microbiology, Music, Music

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Education, Neuroscience, Pharmacy, Parks, Tourism and Recreation Management, Physics and Astronomy (Astronomy, Computational Physics, Teaching Broadfield Science concentrations), Resource Conservation, Theatre (Bachelor of Fine Arts only; BA students must complete the language requirement), Wildlife Biology.

### Group IV: Expressive Arts (A)

Expressive Arts courses are activity-based and emphasize the value of learning by doing in an artistic context. Upon completion of an Expressive Arts course, students will be able to express themselves in the making of an original work or creative performance, understand the genres and/or forms that have shaped the medium, and critique the quality of their own work and that of others.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
ARTZ 103A	Art for Non-Majors	3
ARTZ 105A	Visual Language - Drawing	3
ARTZ 106A	Visual Language - 2-D Fndtns	3
ARTZ 108A	Visual Language - 3-D Fndtns	3
ARTZ 131A	Ceramics for Non-majors	3
ARTZ 211A	Drawing I	3
ARTZ 221A	Painting I	3
ARTZ 231A	Ceramics I	3
ARTZ 251A	Sculpture I	3
ARTZ 271A	Printmaking I	3
ARTZ 284A	Photo I-Techs and Processes	3
ARTZ 302A	Elementary School Art	2
COMX 111A	Introduction to Public Speaking	3
CRWR 210A	Intro Fiction Workshop	3
CRWR 211A	Intro Poetry Workshop	3
CRWR 212A	Intro Nonfiction Workshop	3
CRWR 312A	Intermediate Nonfiction Workshop	3
CRWR 240A	Intro Creative Writing Wrkshp	3



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DANC 100A	Introduction to Modern Dance	3
DANC 108A	Dance Forms	3
DANC 110A	Introduction to Ballet	3
DANC 115A	Introduction to Jazz Dance	3
DANC 129A	Dance Performance Lab I	1
DANC 130A	Introduction to Dance	3
DANC 160A	Dance Forms: Irish	2
DANC 165A	Dance Forms: African	3
DANC 170A	Dance Forms: Tribal Belly	2
DANC 200A	Contemporary Modern II	2
DANC 210A	Ballet II	2
DANC 215A	Jazz Dance II	2
DANC 229A	Dance Performance Lab II	1
DDSN 113A	Technical Drafting	3
ENST 373A	Nature Works	3
GDSN 149A	Digital Imaging I	3
JRNL 140A	Intro Radio/Audio Storytelling	3
JRNL 257A	Beginning Visual Journalism	3
MART 111A	Intro to Photoshop	3
MART 112A	Introduction to Film Editing	3
MUSI 102A	Performance Study	1-2
MUSI 104A	Music Fundamentals	3
MUSI 108A	Orchestra: UMSO	1
MUSI 110A	Opera Theatre I	1

MUSI 111A	Group Voice Class	2
MUSI 112A	Choir	1
MUSI 114A	Band: UM Concert Band	1
MUSI 122A	Percussion Ensemble: UM	1
MUSI 123A	World Percussion Ensemble	1
MUSI 131A	Jazz Ensemble I: UM Jazz Bands	1
MUSI 135A	Keyboard Skills I	1
MUSI 136A	Keyboard Skills II	1
MUSI 155A	Marching: Grizzly Marchng Band	1
MUSI 160A	Beginning Guitar	2
MUSI 162A	Chamber Ensembles I	1
MUSI 267A	Composer's Workshop	1
MUSI 304A	Sound in the Natural World	3
MUST 227A	Mtn Electroacoustc Lptp Ens I	1
THTR 102A	Introduction to Theatre Design	3
THTR 107A	Theat Prod I: Constr Crew	3
THTR 113A	Introduction to Voice Acting	3
THTR 120A	Introduction to Acting I	3
THTR 239A	Creative Drama/Dance: K-8	2

### Group V: Literary and Artistic Studies (L)

In these courses, students develop familiarity with significant works of artistic representation, including literature, music, visual art, and/or performing arts. Through this experience, students enhance their analytical skills and explore the historical, aesthetic, philosophical, and cultural features of these works.

Upon completion of a Literary and Artistic Studies course, students will be able to:

1. analyze works of art with respect to structure and significance within literary and artistic traditions, including emergent movements and forms; and

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2. develop coherent arguments that critique these works from a variety of approaches, such as historical, aesthetic, cultural, psychological, political, and philosophical.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
ARTH 160L	Global Visual Culture	3
ARTH 250L	Introduction to Art Criticism	3
CHIN 313L	Chinese Poetry in Translation	3
CLAS 160L	Classical Mythology	3
CLAS 251L	The Epic	3
CLAS 252L	Greek Drama: Politics on Stage	3
COMX 140L	Introduction to Visual Rhetoric	3
CRWR 115L	Montana Writers Live	3
DANC 234L	Dance in Popular Movies	3
DANC 360L	World Dance	3
ENST 335L	The Environmental Vision	3
GH 151L	Introduction to Western Humanities Antiquity	3
GH 161L	Asian Humanities	3
GH 328L	Gender Sexuality India	3
GRMN 317L	Intro Multicultural Lit German	3
GRMN 322L	Survey of German Cinema	3
GRMN 340L	Nature and the Environment in German Literature and Film	3
HONR 121L	Ways of Knowing	3
HSTR 211L	Early Christianity	3
IRSH 345L	Literature in the Irish Lang	3
JPNS 312L	Japanese Literature: Medieval to Modern	3
LIT 110L	Intro to Lit	3

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LIT 120L	Poetry	3
LIT 191L	Special Topics: Dylan and His Time	3
LIT 191L	Special Topics: Science Fiction	3
LIT 236L	Literary Histories	3
LIT 246L	Genres, Themes, Approaches	3
LIT 280L	Ecology of Literature	3
LIT 337L	Gender & Sexuality in Eng Fict	3
LIT 349L	Medieval Lit	3
LIT 350L	Chaucer	3
LIT 353L	Milton	3
LIT 378L	Gay and Lesbian Studies	3
MART 101L	Intro to Media Arts	3
MUSI 101L	Enjoyment of Music	3
MUSI 130L	History of Jazz	3
MUSI 132L	History of Rock & Roll	3
MUSI 202L	Intro to Music Literature	3
NASX 235X	Oral/Written Trads Native Amer	3
NASX 239L	Nat North Amer History & Art	3
PHL 101L	Introduction to Philosophy	3
PHL 102L	Topical Intro to Philosophy	3-4
PHL 327L	Aesthetics and the Arts	3
RLST 225L	Christianity	3
RUSS 306L	Evil and the Supernatural in Russian Literature	3
RUSS 307L	Beauty, Power and Pride in Russian Literature	3

THTR 101L	Introduction to Theatre	3
THTR 235L	Dramatic Literature	3
WGSS 163L	Hist/Lit Persp Women	3

## Group VI: Historical Studies (H)

The primary purpose of courses in this perspective is to explore the historical contexts and narratives of human behavior, ideas, institutions, and societies through an analysis of their patterns of development or differentiation in the past. These courses are wide-ranging in chronological, geographical, or topical focus. They introduce students to methods of inquiry that enable them to understand and evaluate the causes and significance of events, texts, or artifacts.

Upon completion of a course in this group, a student will be able to:

1. Critically analyze and evaluate primary sources such as texts, pictorial evidence, oral histories, music, and artifacts- within their respective historical contexts.
2. Synthesize ideas and information in order to understand the problems, causes, and consequences of historical developments and events.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
AAST 141H	Black: From Africa to Hip-Hop	3
AAST 208H	Africa: From Ancient Egypt to Apartheids Origin	3
ANTY 101H	Anthro & the Human Experience	3
ANTY 102H	Intro to South & S. East Asia	3
ANTY 103H	Intro Latin American Studies	3
ANTY 141H	The Silk Road	3
ANTY 241H	Central Asian Culture and Civ	3
ANTY 351H	Archaeology of North America	3
ANTY 354H	Mesoamerican Prehistory	3
ARTH 150H	Introduction to Art History	3
ARTH 161H	Topics in Art	3
ARTH 200H	Art of World Civilization I	3

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ARTH 201H	Art of World Civilization II	3
ARTH 202H	Alternative Approaches to Art History	3
ARTH 333H	Architectural History I	3
ARTH 334H	Architectural History II	3
CLAS 180H	Env & Nat in Classical World	3
CLAS 360H	Ancient Greek Civ and Culture	3
COMX 240H	Introduction to Rhetorical Theory	3
ENST 230H	Nature and Society	3
ENST 231H	Nature and Society	3
GRMN 106H	Introduction to German Culture and Civilization	3
GRMN 351H	German Culture: Beginnings to Romanticism	3
GRMN 352H	Germ Culture: Romanticism to the Present	3
HSTA 101H/103H	American History I	4
HSTA 102H/104H	American History II	4
HSTA 150H	The Veteran's Experience	3
HSTA 285H	Sex and Gender in US History	3
HSTA 342H	Afr Amer Hist to 1865	3
HSTA 343H	Afr Amer Hist Since 1865	3
HSTA 370H	Wmn Amer Colonial to Civil War	3
HSTA 371H	Wmn Amer Civil War to Present	3
HSTR 101H/103H	Western Civilization I	4
HSTR 102H/104H	Western Civilization II	4
HSTR 221H	God- Past, Puzzle, Present	3
HSTR 230H	Colonial Latin America	3

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HSTR 231H	Modern Latin America	3
HSTR 240H	East Asian Civilizations	3
HSTR 302H	Ancient Greece	3
HSTR 304H	Ancient Rome	3
JPNS 150H	Japanese Cult & Civiliz	3
JRNL 100H	Media History and Literacy	3
MART 201H	Hist Digital Arts & Culture	3
MUSI 301H	Music History I	3
MUSI 302H	Music History II	3
NASX 105H	Intro Native Amer Studies	3
PHL 241N	Hist & Philosophy of Science	3
RLST 238H	Japanese Religions	3
SSEA 202X	Introduction to India	3
THTR 330H	Theatre History I	3

### Group VII: Social Sciences (S)

Social science courses describe and analyze human social organization and interaction, employing social data at a broad scale with statistical relevance, experimental data on individuals or groups, or qualitative data based on observation and discourse.

Upon completion of a Social Sciences course, students will be able to:

1. Describe the nature, structure, and historical development of human behavior, organizations, social phenomena, and/or relationships;
2. Use theory in explaining these individual, group, or social phenomena; and/or
3. Understand, assess, and evaluate how conclusions and generalizations are justified based on data.

CODE	TITLE	HOURS
ANTY 122S	Race and Minorities	3
ANTY 220S	Culture & Society	3

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ANTY 250S	Intro to Archaeology	3
BFIN 205S	Personal Finance	3
BGEN 105S	Introduction to Business	3
BGEN 160S	Issues in Sustainability	3
BMGT 101S	Intro to Entertainment Mgmt	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 202S	Nonverbal Communication	3
COMX 219S	Survey of Children's Comm	3
COMX 220S	Introduction to Organizational Communication	3
COUN 242S	Intimate Relationships	3
ECNS 101S	Economic Way of Thinking	3
ECNS 201S	Principles of Microeconomics	3
ECNS 202S	Principles of Macroeconomics	3
ENST 225S	Sustainable Communities	3
ENST 489S	Environmental Justice Issues & Solutions	3
GPHY 121S	Human Geography	3
GPHY 141S	Geography of World Regions	3
GPHY 323S	Economic Geography of Rural Areas	3
LING 270S	Intro to Linguistics	3
NRSM 121S	Nature of Montana	3
NRSM 370S	Wildland Conservation Policy/Governance	3
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSYX 100S	Intro to Psychology	3



PSYX 161S	Fund of Organizational Psych	3
PTRM 210S	Nature Tourism & Comm Rec	3
PTRM 217S	Parks & Outdoor Rec. Mgmt.	3
PUBH 101S	Introduction to Public Health	3
SOCI 101S	Introduction to Sociology	3
SOCI 130S	Soc of Alternative Religions	3
SOCI 211S	Introduction to Criminology	3
SOCI 212S	Social Issues Southeast Asia	3
SOCI 220S	Race, Gender & Class	3
SOCI 260S	Introduction to Juvenile Delinquency	3
SOCI 275S	Gender and Society	3
S W 100S	Intro Soc Welfare	3
WGSS 263S	Social and Political Perspectives on Gender and Sexuality	3

### Group VIII: Ethics and Human Values (E)

Ethics and Human Values courses familiarize students with one or more traditions of ethical thought. These courses rigorously present the basic concepts and forms of reasoning that define and distinguish each tradition. The focus of these courses may be on one or more of these traditions, or on a concept such as justice or the good life as conceptualized within one or more of these traditions, or on a professional practice within a particular tradition.

Upon completion of an Ethics and Human Values course, students will be able to:

1. Correctly apply the basic concepts and forms of reasoning from the tradition or professional practice they studied to ethical issues that arise within those traditions or practices;
2. Analyze and critically evaluate the basic concepts and forms of reasoning from the tradition or professional practice they studied.

CODE	TITLE	HOURS
AHMS 270E	Medical Ethics	3
ANTY 326E	Indigenous Peoples & the Ethics of Development	3

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BGEN 220E	Business Ethics and Social Responsibility	3
CHMY 305E	Ethics, Literature and Writing in the Sciences	3
CLAS 365E	The Roots of Western Ethics	3
CSCI 215E	Social & Ethical Issues in CS	3
CSCI 315E	Computers, Ethics, and Society	3
EDU 407E	Ethics & Policy Issues	3
ENST 320E	Earth Ethics	3
GEO 304E	Science and Society	3
GH 389E	Placebos: The Power of Words	3
HONR 122E	Ways of Knowing II	3
HONR 320E	Art of Inquiry: Research and Capstone Seminar	3
HSTA 201E	History of American Democracy	3
HSTR 210E	History of the Bible	3
HSTR 211L	Early Christianity	3
HSTR 272E	Terrorism:Viol Mod Wrld	3
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
LEG 184E	Legal Ethics	3
NASX 303E	Ecological Perspectives in Native American Traditions	3
NASX 304E	Native American Beliefs/Philos	3
NRSM 349E	Climate Change Ethics/Policy	3
NRSM 389E	Ethics Forestry & Conservation	3
PHAR 514E	Case Studies Pharm Ethics	3
PHL 110E	Introduction to Ethics	3
PHL 112E	Intro Ethics and Environment	3

PHL 114E	Intro to Political Ethics	3
PHL 191	Special Topics (Neuroethics - one time only spring 2020)	3
PHL 210E	Moral Philosophy	3
PHL 309E	The Art of Living	3
PHL 317E	Law and Morality	3
PHL 319E	Law and Discrimination	3
PHL 321E	Philosophy & Biomedical Ethics	3
PSCI 250E	Intro to Political Theory	3
PUBH 475E	Public Health Ethics	3
RLST 281E	Comparative Ethics	3
S W 410E	Social Work Ethics	3

### Group IX: Democracy and Citizenship (Y)

These courses ground students in the ideas, institutions, and practices of democratic societies and their historical antecedents. Knowledge gained through courses in the Democracy and Citizenship perspective prepares students to understand the rights and responsibilities of engaged citizenship and to assess the characteristics, contributions, and contradictions of democratic systems.

Upon completion of a Democracy and Citizenship course, students will be able to:

1. Demonstrate informed and reasoned understanding of democratic ideas, institutions and practices, from historical and/or contemporary perspectives;
2. Analyze and evaluate the significance and complexities of engaged citizenship; and
3. Articulate the causes and consequences of key historical and/or contemporary struggles within democratic systems or their antecedents, including but not limited to those pertaining to issues of diversity, equity, and justice.

CODE	TITLE	HOURS
ANTY 122S	Race and Minorities	3
COMX 140L	Introduction to Visual Rhetoric	3
COMX 205Y	Deliberative Democracy	3

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ENST 225S	Sustainable Communities	3
HONR 122E	Ways of Knowing II	3
HSTA 101H/103H	American History I	4
HSTA 102H/104H	American History II	4
HSTA 150H	The Veteran's Experience	3
HSTA 201E	History of American Democracy	3
HSTA 307Y	The American Revolution and Founding Era	3
HSTR 101H/103H	Western Civilization I	4
HSTR 102H/104H	Western Civilization II	4
JRNL 100H	Media History and Literacy	3
JRNL 102Y	News Literacy	3
LSCI 210Y	Who Owns Culture? An Introduction to Copyright	3
MUSI 301H	Music History I	3
MUSI 302H	Music History II	3
PHL 114E	Intro to Political Ethics	3
PHL 261Y	History of Ancient Philosophy	3
PHL 262Y	History of Modern Philosophy	3
PHL 317E	Law and Morality	3
PHL 319E	Law and Discrimination	3
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 352Y	American Political Thought	3
PTRM 141Y	National Parks and American Culture	3
RUSS 105Y	Intro to Russian Culture	3

SOCI 220S	Race, Gender & Class	3
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### Group X: Cultural & International Diversity (X)

These courses foster an appreciation for diverse cultures, their histories and values, and their struggles both to maintain their ways of life and to gain equal positions in world spheres of power and change. This includes knowledge of diverse cultures in comparative and thematic frameworks. Knowledge gained through courses in the Cultural & International Diversity perspective prepares students to cultivate ways of thinking that foster an understanding of the complexities of indigenous or international cultures and global issues, past and present.

Upon completion of a course in this group, students will be able to:

1. Demonstrate an understanding of the diverse ways humans structure their social, political, and cultural lives;
2. Interpret human activities, ideas, and institutions with reference to diverse cultural, historical and geopolitical perspectives and physical environments; and
3. Recognize the complexities of inter-cultural and international communications and collaborative endeavors, and relate this to the complex challenges of the 21st century.

CODE	TITLE	HOURS		
AAST 141H	Black: From Africa to Hip-Hop	3		
ANTY 101H	Anthro & the Human Experience	3		
ANTY 102H	Intro to South & S. East Asia	3		
ANTY 103H	Intro Latin American Studies	3		
ANTY 133X	Food and Culture	3		
ANTY 141H	The Silk Road	3		
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	3		

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ANTY 220S	Culture & Society	3		
ANTY 241H	Central Asian Culture and Civ	3		
ANTY 254X	Arch Wonders of the World	3		
ANTY 323X	Native Peoples of Montana	3		
ANTY 330X	Peoples and Cultures of World	3		
ANTY 351H	Archaeology of North America	3		
ANTY 352X	Archaeology of Montana	3		
ARTH 150H	Introduction to Art History	3		
ARTH 200H	Art of World Civilization I	3		
CAS 140X	Addictions and Diversity	3		
CCS 103X	Intro Climate Change:Sci & Soc	3		
COMX 204X	International and Development Communication	3		
COMX 212X	Introduction to Intercultural Communication	3		
DANC 360L	World Dance	3		
GPHY 121S	Human Geography	3		

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GPHY 141S	Geography of World Regions	3		
HSTR 230H	Colonial Latin America	3		
HSTR 231H	Modern Latin America	3		
HSTR 240H	East Asian Civilizations	3		
JPNS 150H	Japanese Cult & Civiliz	3		
JRNL 105X	Global Current Events	3		
LING 375X	Linguistic Ecology and Language Endangerment	3		
MUSI 207X	World Music (equiv to 307)	3		
NASX 105H	Intro Native Amer Studies	3		
NASX 201X	Indian Cultr Exprssd Thru Lang	3		
NASX 210X	Native Amer Sports & Games	3		
NASX 231X	Indig World View Perspectives	3		
NASX 235X	Oral/Written Trads Native Amer	3		
NASX 260X	Indig Community Developmnt	3		

NASX 304E	Native American Beliefs/Philos	3		
NASX 354X	Indians of MT since Rsrvtn Era	3		
PHL 319E	Law and Discrimination	3		
PSCI 230X	Intro to International Relations	3		
PTRM 345X	Sustaining Human Soc & Nat Env	3-6		
RLST 202X	Hindu Traditions	3		
RLST 234X	Hindu Religious Traditions	3		
RUSS 105Y	Intro to Russian Culture	3		
SSEA 202X	Introduction to India	3		
WGSS 150X	Women's Rights and Women's Roles Around the World	3		

## Group XI: Natural Science (N)

These courses present scientific conclusions about the structure and function of the natural world, and demonstrate or exemplify scientific questioning and validation of findings.

Upon completion of a Natural Science course, a student will be able to:

1. understand the general principles associated with the discipline(s) studied;
2. understand the methodology and activities scientists use to gather, validate and interpret data related to natural processes;
3. detect patterns, draw conclusions, develop conjectures and hypotheses, and test them by appropriate means and experiments;
4. understand how scientific laws and theories are verified by quantitative measurement, scientific observation, and logical/critical reasoning;



## University Of Montana

5. and understand the means by which analytic uncertainty is quantified and expressed in the natural sciences

### Natural Science Courses Without a Laboratory Experience

CODE	TITLE	HOURS
ANTY 210N	Intro to Physical Anthropology	3
ASTR 131N	Planetary Astronomy	3
ASTR 132N	Stars, Galaxies, and the Universe	3
BIOB 109N	Montana Ecosystems	3
BIOB 130N	Evolution and Society	3
BIOB 160N	Principles of Living Systems	3
BIOB 170N	Princpls Biological Diversity	3
BIOB 191N	ST: Life in the Mountains	3
BIOB 210N	Communicating Biology	3
BIOB 226N	Gen Science: Chemical & Life Science	3
BIOE 172N	Introductory Ecology	3
BIOH 104N	Basic Human Biology	3
BIOM 250N	Microbiology for Hlth Sciences	3
CAS 231N	Pharmacology and Addictions	3
CHMY 121N	Introduction to General Chemistry	4
CHMY 141N	College Chemistry I	4
CHMY 143N	College Chemistry II	4
CJUS 125N	Fund of Forensic Science	3
CSD 221N	Fundamentals of Acoustics	3
ENSC 105N	Environmental Science	3
ERTH 303N	Weather and Climate	3

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GEO 101N	Introduction to Physical Geology	3
GEO 103N	Introduction to Environmental Geology	3
GEO 105N	Oceanography	3
GEO 107N	Natural Disasters	3
GPHY 111N	Intro to Physical Geography	3
GPHY 311N	Biogeography	3
NEUR 110N	Introduction to Brain Diseases	3
NRSM 271N	Conservation Ecology	3
NUTR 221N	Basic Human Nutrition	3
PHAR 110N	Use & Abuse of Drugs	3
PHL 241N	Hist & Philosophy of Science	3
PHSX 105N	Fundamentals of Physical Science	3
PHSX 141N	Einstein's Relativity	3
PHSX 205N	College Physics I	4
PHSX 207N	College Physics II	4
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 217N	Fund of Physics w/Calc II	4
PSYX 250N	Fund of Biological Psychology	3
WILD 105N	Wildlife & People	3

### Natural Science Courses with a Laboratory Experience

CODE	TITLE	HOURS
ANTY 213N	Physical Anthropology Lab	1
ASTR 134N	Planetary Astronomy Lab	1
ASTR 135N	Stars, Galaxies, and the Universe Lab	1
ASTR 142N	The Evolving Universe	4

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BIOB 101N	Discover Biology	3
BIOB 109N	Montana Ecosystems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 226N	Gen Science: Earth & Life Sci	5
BIOH 105N	Basic Human Biology Laboratory	1
BIOH 201N	Human Anat Phys I (equiv 301)	4
BIOH 202N	Human Anat and Phys I Lab	4
BIOH 211N	Human Anat Phys II (equiv 311)	4
BIOH 212N	Human Anat Phys II Lab	4
BIOH 213N	The Biology of Behavior	3
BIOO 105N	Introduction to Botany	3
CHMY 142N	College Chemistry I Lab	1
CHMY 144N	College Chemistry II Lab	1
FORS 241N	Dendrology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 104N	Introduction to Environmental Geology Laboratory	1
GEO 224N	Gen Science: Physics and Geoscience	5
GPHY 112N	Intro to Phys Geography Lab	1
NRSM 210N	Soils, Water and Climate	3
PHSX 206N	College Physics I Laboratory	1
PHSX 208N	College Physics II Laboratory	1
PHSX 216N	Physics Laboratory I w/Calc	1

PHSX 218N	Physics Laboratory II w/Calc	1
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## Office for Student Success < University of Montana

### Office for Student Success

The mission of the Office for Student Success (OSS) is to help students successfully transition to college, progress academically and ultimately become graduates of the University of Montana. OSS initiates and leads collaboration with academic departments, state and local organizations and administrative units across campus to define, implement and assess programs that support students academically, financially and socially.

OSS delivers direct support services to students in the form of academic advising, math and writing tutoring, and freshman/sophomore programming. The Undergraduate Advising Center and the Writing Center are administered by the OSS.

### Undergraduate Advising Center

The Undergraduate Advising Center is a university service staffed by professional advisors and peer advising assistants committed to helping undergraduate students achieve a successful college experience. The UAC programs guide students as they transition to college, assisting them in clarifying academic goals and exploring majors.

Advisors in the UAC work with both faculty and full-time advisors in each of the Colleges to assist students in making decisions about major areas of study and to ensure smooth transitions to and from majors. Working collaboratively, the full-time advisors of the Center consult with academic departments to provide new and creative opportunities for students to explore majors and careers that align with their abilities, interests, and strengths.

UAC advisors are the advisor of record for first year students who plan to major in Business, Pre-Nursing, Psychology, or Communication Studies and all students who have not yet declared a major.

### The Writing Center

The Writing Center administers programs to help undergraduate and graduate students in all disciplines become more independent, versatile, and effective writers, readers, and thinkers. Writing Center tutors engage students in structured discussions about writing, challenging them to develop as writers and thinkers who contribute to local and global conversations. Focused on the development of the writer, tutors help students to recognize their strengths and weaknesses as communicators and to practice strategies appropriate to various writing contexts.

The Writing Center also collaborates with faculty to positively impact student performance. These collaborations include delivery of discipline-specific writing workshops across the curriculum and professional development opportunities such as workshops on how to design writing assignments and how to provide students with effective feedback on their writing. In an effort to support all writers at the University of Montana, the Writing Center also supports faculty and staff writers by providing one-to-one consultations on their professional writing projects.

### Four Bear Four-Year Graduation Plan

## University Of Montana

The Four Bear Four Year Graduation program is designed for students committed to completing their degree at the University of Montana within four years. Four Bear participants are provided with registration priority after signing the Four Bear contract in the first year. The program pays tuition and mandatory fees past the planned graduation time provided the student has met all of the requirements for continued participation. Pharmacy is an exception to the four-year plan; students are given five or six years to complete this degree.

Most department sections in the catalog include a suggested four-year course of study to complete a major. Four-Bear students must meet with their advisors in order to customize a plan to fit individual circumstances and academic.

## Colleges, Schools, & Programs

### A

- Accounting B.S.
- Accounting Fundamentals C.A.S.
- Accounting Information Systems Certificate
- Accounting Technology A.A.S.
- Accounting Technology A.A.S. - Computer Support
- Administrative Management A.A.S.
- Administrative Management A.A.S. - Social Media Management
- Advanced Medical Imaging Certificate
- African American Studies Certificate
- African-American Studies B.A.
- African-American Studies Minor
- Anthropology B.A.
- Anthropology B.A. - Archaeology
- Anthropology B.A. - Cultural and Ethnic Diversity
- Anthropology B.A. - Forensic Anthropology
- Anthropology B.A. - Linguistics
- Anthropology B.A. - Medical Anthropology
- Anthropology Minor
- Arabic Studies Minor
- Art B.A.
- Art B.A. (Online Delivery)
- Art B.F.A.
- Art History and Criticism Minor
- Art Studio Minor
- Associate of Arts (A.A.)
- Associate of Arts (A.A.) - Communication Studies

## University Of Montana

- Associate of Arts (A.A.) - Professional Communication
- Astronomy Minor

## B

- Bachelor of Applied Science
- Big Data Analytics Certificate
- Biochemistry B.S.
- Biochemistry B.S. - Health Professions
- Biochemistry Minor
- Bioinformatics Certificate
- Biology B.A. - Biological Education
- Biology B.A. - Natural History
- Biology B.A. - Teacher Preparation General Science Broadfield
- Biology B.S. - Cellular and Molecular Biology
- Biology B.S. - Ecology and Organismal Biology
- Biology B.S. - Field Ecology
- Biology B.S. - Genetics and Evolution
- Biology B.S. - Human Biological Sciences
- Biology Minor
- Business Administration Minor
- Business Media Design C.A.S.

## C

- Carpentry C.A.S.
- Central and Southwest Asian Studies B.A.
- Central and Southwest Asian Studies Minor
- Chemistry B.A.
- Chemistry B.S.
- Chemistry B.S. - Environmental Chemistry



## University Of Montana

- Chemistry B.S. - Forensic Chemistry
- Chemistry B.S. - Pharmacology
- Chemistry Minor
- Chinese Minor
- Classical Civilization Minor
- Classics B.A. - Classical Civilization
- Classics B.A. - Classical Languages
- Classics B.A. - Latin Concentration
- Climate Change Studies Minor
- Communication Studies B.A.
- Communication Studies B.A. - Communication and Human Relationships
- Communication Studies B.A. - Organizational Communication
- Communication Studies B.A. - Rhetoric and Public Discourse
- Communication Studies Minor
- Communicative Sciences and Disorders B.A.
- Communicative Sciences and Disorders Minor
- Community Agriculture Certificate
- Computational Biochemistry B.S.
- Computer Aided Design C.A.S.
- Computer Applications Minor
- Computer Programming Certificate
- Computer Science B.S.
- Computer Science Minor
- Computer Science-Mathematical Sciences (Combined Major)
- Computer Support C.A.S.
- Construction Helper C.T.S.
- Construction Management C.A.S.
- Culinary Arts C.A.S.
- Customer Relations C.A.S.

## University Of Montana

- Cybersecurity C.T.S.
- Cybersecurity Management Certificate

## D

- Dance B.A.
- Dance B.F.A.
- Dance Education Minor
- Dance Minor
- Diesel Technology A.A.S.
- Digital Marketing Certificate
- Doctor of Pharmacy

## E

- Early Childhood Education Minor
- Early Childhood Education P-3 B.A.
- East Asian Studies B.A.
- Ecological Restoration Minor
- Economics B.A.
- Economics Minor
- Ecosystem Science and Restoration - Aquatic
- Ecosystem Science and Restoration - Terrestrial
- Elementary Education B.A.
- Energy Auditor C.T.S.
- English as a Second Language Certificate
- English B.A. - Creative Writing
- English B.A. - Linguistics
- English B.A. - Literature
- English B.A. - Literature and the Environment
- English B.A. - Teaching English

## University Of Montana

- English Minor
- Entertainment Management Certificate
- Entrepreneurship and New Venture Creation Certificate
- Environmental Ethics Certificate
- Environmental Studies B.A.
- Environmental Studies Minor
- Ethics Minor
- European Studies Minor
- Exercise Science - Applied, Health and Human Performance B.S.
- Exercise Science - Pre-Professional, Health and Human Performance B.S.

## F

- Facility Management C.A.S.
- Film Studies Minor
- Finance B.S.
- Fire Sciences and Management Minor
- Food Service Management A.A.S.
- Forensic Studies Certificate
- Forestry B.S.
- French B.A.
- French Minor

## G

- Geographic Information Systems Certificate
- Geography B.A.
- Geography B.A. - Community and Environmental Planning
- Geography B.S.
- Geography B.S. - Physical Geography
- Geography Minor

## University Of Montana

- Geosciences B.S.
- Geosciences B.S. - Earth Science Education Concentration
- Geosciences Minor
- German B.A.
- German Minor
- Gerontology Minor
- Global Leadership Certificate
- Global Public Health Minor
- Greek Minor
- Green Building C.T.S.

## H

- Health Behavior Coaching Certificate
- Health Communication
- Health Information Technology Certificate
- Heavy Equipment Operation C.A.S.
- Historic Preservation Certificate
- History B.A.
- History B.A. - History Education
- History Minor
- History-Political Science B.A.
- Hospitality Management A.A.S.
- Hospitality Management C.A.S.
- Human and Family Development Minor
- HVAC Technician Certificate

## I

- Information Technology A.A.S. - Network Administration and Security
- Information Technology A.A.S. - Programming and App Development

## University Of Montana

- International Business B.S.
- International Development Studies Minor
- International Field Geosciences Dual
- International Field Geosciences Joint
- Irish Studies Minor

## J

- Japanese B.A.
- Japanese Minor
- Journalism B.A.
- Journalism Minor

## L

- Language Rejuvenation and Maintenance Certificate
- Latin American Studies Minor
- Latin Minor
- Linguistics B.A.
- Linguistics Minor

## M

- Management & Entrepreneurship B.S.
- Management A.A.S. - Entrepreneurship
- Management A.A.S. - Sales and Marketing
- Management Information Systems B.S.
- Marketing B.S.
- Mathematical Sciences-Computer Science B.S. (Combined Major)
- Mathematics B.A.
- Mathematics B.A. - Applied Mathematics
- Mathematics B.A. - Combinatorics and Optimization
- Mathematics B.A. - Mathematics Education

## University Of Montana

- Mathematics B.A. - Pure Mathematics
- Mathematics B.A. - Statistics
- Mathematics Minor
- Media Arts B.A.
- Media Arts B.F.A
- Media Arts Minor
- Medical Assisting A.A.S.
- Medical Claims Specialist C.T.S.
- Medical Information Technology A.A.S. - Health Information Coding Specialty
- Medical Information Technology A.A.S. - Medical Administrative Assisting
- Medical Laboratory Science B.S.
- Medical Reception C.A.S.
- Microbiology B.S.
- Microbiology B.S. - Microbial Ecology
- Microbiology Minor
- Military Studies Minor
- Music - Bachelor of Arts (B.A.)
- Music - Bachelor of Music (B.M.)
- Music - Bachelor of Music Education (B.M.E)
- Music Minor

## N

- Native American Studies B.A.
- Native American Studies Certificate
- Native American Studies Minor
- Neuroscience B.S. - Cellular and Molecular Neuroscience
- Neuroscience B.S. - Cognitive Neuroscience
- Nonprofit Administration Minor
- Northern Rockies Outdoor Leadership Certificate

## University Of Montana

### P

- Paralegal Studies A.A.S.
- Paramedicine A.A.S.
- Parks, Tourism, and Recreation Management B.S.
- Pharmaceutical Sciences B.S.
- Philosophy B.A.
- Philosophy Minor
- Physics B.A.
- Physics B.A. - Astronomy
- Physics B.A. - Computational Physics
- Physics B.A. - Teaching Broadfield Science
- Physics Minor
- Political Science B.A.
- Political Science B.A. - American Politics
- Political Science B.A. - International Relations and Comparative Politics
- Political Science B.A. - Public Administration and Public Policy
- Political Science B.A. - Public Law
- Political Science Minor
- Precision Machine Technology C.A.S.
- Precision Machine Technology C.T.S.
- Psychology B.A.
- Psychology Minor
- Public and Community Health, Health and Human Performance B.S.

### R

- Radiologic Technology A.A.S.
- Recycling Technology C.T.S.
- Registered Nursing A.S.
- Resource Conservation B.S.

## University Of Montana

- Respiratory Care A.A.S.
- Russian B.A.
- Russian Minor
- Russian Studies Minor

## S

- Sales and Marketing Certificate
- Secondary Licensure
- Social Work B.A.
- Sociology B.A.
- Sociology B.A. - Criminology
- Sociology B.A. - Inequality and Social Justice
- Sociology Minor
- South and South-East Asian Studies Minor
- Spanish B.A.
- Spanish Minor
- Speech Language Pathology/Audiology Assistant Certificate
- Surgical Technology A.A.S.
- Sustainable Business Strategy Certificate
- Sustainable Construction Technology A.A.S.

## T

- Teaching ESL Licensure
- Teaching Library Media Licensure
- Teaching Reading Licensure
- Teaching Special Education Licensure
- Technology in Education Licensure
- Theatre B.A.
- Theatre B.F.A.



## University Of Montana

- Theatre B.F.A. - Musical Theatre Performance
- Theatre Education Minor
- Theatre Minor

## W

- Water Science and Society Certificate
- Welding Technology A.A.S.
- Welding Technology C.A.S.
- Wilderness Studies Minor
- Wildlife Biology - Aquatic
- Wildlife Biology - Terrestrial
- Wildlife Biology Minor
- Women's, Gender and Sexuality Studies B.A.
- Women's, Gender and Sexuality Studies Minor
- World Competencies Certificate

## College of the Arts and Media

**John DeBoer, Interim Dean**

The College of the Arts and Media is comprised of three professionally accredited schools:

- Journalism
- Music
- Theatre and Dance
- Visual and Media Arts

The College of the Arts and Media is committed to leadership in pedagogy, creative scholarship, professional performance, artistic exhibition, and journalistic inquiry. The College prides itself on its high achieving faculty, successful alumni, and talented students who work hard to ensure that the University of Montana serves as the heart of culture and media for the state and region. Each program in the College is designed to:

- Teach students with rigor and devotion by offering in-depth experiential learning that enables them to perform, create, and interrogate big questions of art, culture, and society with specificity and maturity, remaining open to diverse perspective.
- Serve the University, the community, state, region, and nation by presenting high quality concerts, productions, exhibitions, and journalism
- Offer scholarly research opportunities for all disciplines to engage students in theoretical explorations of all forms of arts and media.
- Provide leadership in the arts and media by enhancing the excellence of traditional curricula, instruction, and research with innovative and imaginative programs that utilize new technologies, incorporate various media, and enhance cultural and intellectual environments.
- Inspire students to pursue excellence in their creative and investigative activities and uphold the free expression of complex ideas.

For more information visit the College of the Arts and Media website.

## School of Music

### James Randall, Director

The School of Music offers students who have demonstrated talent in music the opportunity to continue further study either for a profession or an avocation and at the same time acquire a broad general education. Complete sequences of courses are given to prepare a student for a career as a teacher or supervisor of music in the elementary/secondary schools; for a career directed toward composition, the music technology industry, private teaching, or concert work; or, for a thorough training in music within the structure of a broad liberal arts curriculum.

Four year degree programs at the undergraduate level include the:

- Bachelor of Music Education (B.M.E.);
- Bachelor of Music (B.M.) with advising tracks in:
  - Composition,
  - Voice Performance,
  - Instrumental Performance,
  - Piano Performance, and
  - Organ Performance.
- Bachelor of Arts (B.A.) in Music with advising tracks in:
  - Composition,
  - Music History,
  - Musical Studies,
  - Jazz Studies, and
  - Applied Studies.

Two-year graduate degree programs include the Master of Music with areas of specialization in:

- Music Education,
- Performance, and
- Composition.

The University of Montana-Missoula is an accredited institutional member of the National Association of Schools of Music.

In general, admission as a major in the School of Music is by certificate from the high school from which the student graduates. The faculty of the School of Music is more concerned with evidence of talent, conspicuous achievement in music, promise of development, and scholarship in general than it is in the precise content of the program which the prospective music student has followed prior to admission to the University.

## University Of Montana

The School of Music welcomes the opportunity for prospective students and parents to consult with faculty and administration by paper and electronic correspondence and/or by appointment interviews on the campus. Every student wishing to become a music major or minor must take the Music Theory Assessment Examination and a Piano Proficiency Evaluation during orientation and also must audition and be accepted officially into the applied studio of a music faculty member prior to confirmation as a fully-admitted major or minor in music. Students may be admitted provisionally for one semester, and at the end of that semester students must re-audition to gain full admittance into a music major degree program.

### Undergraduate

- Music B.A.
- Music B.Mus.
- Music Education B.M.E.

### Undergraduate Minors

- Music Minor

University Of Montana

## **Music - Bachelor of Arts (B.A.)**

### **Bachelor of Arts - Music**

**College of the Arts and Media**

**Degree Specific Credits:** 53-66

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** Students must complete 51 Credits of non-Music major courses.

### **General Educational Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

# University Of Montana

Core Music Requirements	39
Music Theory	
Aural Perception	
Keyboard Skills	
Music History	
Humanities	
Applied Study	
Ensembles	
Concert Attendance	
Advanced Writing Requirement for Music	
Bachelor of Arts in Music Advising Tracks	14-27
Composition	
Music History	
Musical Studies	
Jazz Studies	
Applied Studies	
Total Hours	53-66

## Core Music Requirements

### Music Theory

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 105	Music Theory I	2
MUSI 106	Music Theory II	2
MUSI 205	Music Theory III	2
MUSI 206	Music Theory IV	2
Total Hours		8

Minimum Required Grade: C-

**Aural Perception**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 140	Aural Perception I	2
MUSI 141	Aural Perception II	2
MUSI 240	Aural Perception III	2
MUSI 241	Aural Perception IV	2
Total Hours		8

Minimum Required Grade: C-

**Keyboard Skills**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 135A	Keyboard Skills I	1
MUSI 136A	Keyboard Skills II	1
Total Hours		2

Minimum Required Grade: C-

**Music History**

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 301H	Music History I	3
MUSI 302H	Music History II	3
Total Hours		6

Minimum Required Grade: C-

**Humanities**

Complete 6 credits from the following departments in the College of Humanities & Sciences:

CODE	TITLE	HOURS
<b>Complete 6 credits from the following departments in the College of Humanities &amp; Sciences:</b>		6
African American Studies		
English		
History		
Latin American Studies		
Native American Studies		
Philosophy		
Women's Gender and Sexuality Studies		
World Languages and Cultures		
Total Hours		6

Minimum Required Grade: C-

**Applied Study**

**Notes:**

- MUSI 195 is take for one credit each semester for a total of 2 credits in the first year.
- MUSI 296 Upper-Division Required Performance is required to advance to upper division study.



## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 195	Applied Study I	2
MUSI 296	Piano Prof Assessment	0
Total Hours		2

Minimum Required Grade: C-

### Ensembles

CODE	TITLE	HOURS
<b>Complete 4 credits in the following courses:</b>		4
MUSI 108A	Orchestra: UMSO	
MUSI 112A	Choir	
or MUSI 110A	Opera Theatre I	
MUSI 114A	Band: UM Concert Band	
MUSI 162A	Chamber Ensembles I	
Total Hours		4

Minimum Required Grade: C-

### Concert Attendance

**Note:**All students majoring in music are required to attend in a minimum of 100 approved recitals/concerts prior to graduation. During the 4th year in an undergraduate degree program and upon completion of this requirement, students should register for MUSI 388, 0 cr.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MUSI 388	Concert Attendance UM	0
Total Hours		0

Minimum Required Grade: C-

### Advanced Writing Course Requirement for Music

**Notes:**

## University Of Montana

- Other advanced writing courses may satisfy this requirement for the Music major at the discretion of the music department.
- Students choosing the Music History Track are required to take all three courses.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 415	Music 20th Century to Present	
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
Total Hours		3

Minimum Required Grade: C-

## Bachelor of Arts in Music Advising Tracks

### Notes:

- For a Bachelor of Arts in Music, you must complete one of the following advising tracks.
- These are advising tracks only and not official programs as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

## Composition Track

CODE	TITLE	HOURS
<b>If choosing the Composition track, complete all of the following courses:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 180	Composition I	2
MUSI 280	Composition II	2
MUSI 380	Composition III	1
MUSI 480	Composition IV	1
MUSI 440	Orchestration	2

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MUST 110	Digital Audio & Multitracking	2
MUST 210	Sequencng, Synthesis, Sampling	2
MUSI 356	Form & Analysis I	2
MUSI 418	Advanced Topics in Music Theory	2
<b>Complete 4 credits in the following courses:</b>		4
MUSE 120	Techs: String Inst in Class I	
MUSE 121	Techs: String Inst in Class II	
MUSE 123	Techniques: Voice	
MUSE 126	Techs: Percussn Instruments I	
MUSE 127	Techs: Percussn Instruments II	
MUSE 272	Techniqus: Flute & Single Reed	
MUSE 273	Techniques: Double Reed	
MUSE 274	Techniques: Upper Brass	
MUSE 275	Techniques: Lower Brass	
<b>Complete 4 credits in the following courses:</b>		4
MUSI 308	Orchestras II: UM	
MUSI 312	Choir III	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band	
MUSI 362	Chmbr Ens III: UM	
Total Hours		27

Minimum Required Grade: C-

## Music History Track

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>If choosing the Music History track, complete all of the following courses:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 207X	World Music (equiv to 307)	3
MUSI 356	Form & Analysis I	2
MUSI 418	Advanced Topics in Music Theory	2
MUSI 415	Music 20th Century to Present	3
MUSI 416	Topics in Music History	3
MUSI 417	Cultural Studies in Music	3
MUSI 499	Senior Recital/Capstone Pjt	2
Total Hours		21

Minimum Required Grade: C-

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## Musical Studies Track

CODE	TITLE	HOURS
<b>If choosing the Musical Studies Track, complete all of the following courses:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 295	Applied Study II	2
MUSI 395	Applied Study III	1
MUSI 356	Form & Analysis I	2
MUSI 418	Advanced Topics in Music Theory	2
<b>Complete one credit in the following courses:</b>		4
MUSI 308	Orchestras II: UM	
MUSI 312	Choir III	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band	
MUSI 362	Chmbr Ens III: UM	
Total Hours		14

Minimum Required Grade: C-

## Jazz Studies Track

CODE	TITLE	HOURS
<b>If choosing the Jazz Studies Track, complete all of the following courses:</b>		
MUSI 130L	History of Jazz	3
MUSI 295	Applied Study II	2
MUSI 395	Applied Study III	1
MUSI 225	Jazz Theory & Improvisation I	2
MUSI 226	Jazz Theory & Improvisation II	2
MUSI 420	Jazz Pedagogy	3
MUSI 470	Jazz Arranging & Composition	3
MUSI 499	Senior Recital/Capstone Pjt	2
<b>Complete 4 credits of the following courses:</b>		4
MUSI 308	Orchestras II: UM	
MUSI 312	Choir III	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band	
MUSI 362	Chmbr Ens III: UM	
Total Hours		22

Minimum Required Grade: C-

## Applied Studies Track

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CODE	TITLE	HOURS
<b>If choosing the Applied Studies Track, complete all of the following courses:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 295	Applied Study II	2
MUSI 395	Applied Study III	2
MUSI 495	Applied Study IV	2
MUSI 356	Form & Analysis I	2
MUSI 418	Advanced Topics in Music Theory	2
<b>Complete 4 credits of the following courses:</b>		4
MUSI 308	Orchestras II: UM	
MUSI 312	Choir III	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band	
MUSI 362	Chmbr Ens III: UM	
Total Hours		17

Minimum Required Grade: C-

University Of Montana

## **Music - Bachelor of Music (B.M.)**

### **Bachelor of Music**

**College of the Arts and Media**

**Degree Specific Credits:** 82-93

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**



# University Of Montana

Core Bachelor of Music Requirements	53
Music Theory	
Aural Perception	
Keyboard Skills	
Music History and Culture	
Applied Study	
Literature, Form, and Analysis	
Ensembles	
Concert Attendance	
Senior Recital/Professional Project	
Advanced Writing Requirement for Music	
Bachelor of Music Advising Tracks	29-40
Composition Track	
Voice Track	
Instrumental Performance Track	
Piano Performance Track	
Organ Performance Track	
Total Hours	82-93

## Core Bachelor of Music Requirements

### Music Theory

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 105	Music Theory I	2
MUSI 106	Music Theory II	2
MUSI 205	Music Theory III	2
MUSI 206	Music Theory IV	2
Total Hours		8

Minimum Required Grade: C-

### Aural Perception

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 140	Aural Perception I	2
MUSI 141	Aural Perception II	2
MUSI 240	Aural Perception III	2
MUSI 241	Aural Perception IV	2
Total Hours		8

Minimum Required Grade: C-

### Keyboard Skills

**Note:** Students choosing the Piano or Organ Performance track are exempt from this requirement as it is fulfilled with additional Applied Study credit.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 135A	Keyboard Skills I	1
MUSI 136A	Keyboard Skills II	1
MUSI 235	Keyboard Skills III	1
MUSI 236	Keyboard Skills IV	1
Total Hours		4

Minimum Required Grade: C-

**Music History and Culture**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 301H	Music History I	3
MUSI 302H	Music History II	3
MUSI 207X	World Music (equiv to 307)	3
Total Hours		9

Minimum Required Grade: C-

**Applied Study**

**Notes:**

- MUSI 195 is take for one credit each semester for a total of 2 credits in the first year.
- MUSI 296 Upper-Division Required Performance is required to advance to upper division study.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 195	Applied Study I	2
MUSI 295	Applied Study II	2
MUSI 395	Applied Study III	1
MUSI 296	Piano Prof Assessment	0
Total Hours		5

Minimum Required Grade: C-

**Literature, Form, and Analysis**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 356	Form & Analysis I	2
MUSI 418	Advanced Topics in Music Theory	2
Total Hours		7

Minimum Required Grade: C-

**Ensembles**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 4 credits in the following courses:</b>		4
MUSI 108A	Orchestra: UMSO	
MUSI 112A	Choir	
or MUSI 110A	Opera Theatre I	
MUSI 114A	Band: UM Concert Band	
MUSI 162A	Chamber Ensembles I	
<b>Complete 3 credits of the following courses:</b>		3
MUSI 308	Orchestras II: UM	
MUSI 312	Choir III	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band	
MUSI 310	Opera Theatre II	
MUSI 331	Jzz Ens II: UM	
MUSI 362	Chmbr Ens III: UM	
Total Hours		7

Minimum Required Grade: C-

**Concert Attendance**

**Note:**All students majoring in music are required to attend in a minimum of 100 approved recitals/concerts prior to graduation. During the 4th year in an undergraduate degree program and upon completion of this requirement, students should register for MUSI 388, 0 cr.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MUSI 388	Concert Attendance UM	0
Total Hours		0

Minimum Required Grade: C-

**Senior Recital/Professional Project**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MUSI 499	Senior Recital/Capstone Pjt	2
Total Hours		2

Minimum Required Grade: C-

**Advanced Writing Course Requirement for Music**

**Notes:**

- Other advanced writing courses may satisfy this requirement for the Music major at the discretion of the music department.
- Students choosing the Music History Track are required to take all three courses.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 415	Music 20th Century to Present	
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
Total Hours		3

Minimum Required Grade: C-

## Bachelor of Music Advising Tracks

**Notes:**

- For a Bachelor of Music, you must complete one of the following advising tracks.
- These are advising tracks only and not official programs as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

### Composition Track

CODE	TITLE	HOURS
<b>If choosing the Composition track, complete all of the following courses:</b>		
MUSI 180	Composition I	4
MUSI 280	Composition II	4
MUSI 380	Composition III	6
MUSI 480	Composition IV	3
MUSI 407	Counterpoint I	3
MUSI 440	Orchestration	2
MUST 110	Digital Audio & Multitracking	2
MUST 210	Sequencng, Synthesis, Sampling	2
MUST 310	Interactivity Digitl Sgnl Proc	2
MUST 410	Computer Music Programming	2
MUSI 335	Instrumental Conducting	2
or MUSI 336	Choral Conducting	
MUSI 415	Music 20th Century to Present	3
Total Hours		35

Minimum Required Grade: C-

## Voice Track

CODE	TITLE	HOURS
<b>If choosing the Voice track, complete all of the following courses:</b>		
MUSI 281	Diction: English, Italian	2
MUSI 282	Dict: Gmn & French (equiv 382)	2
MUSI 310	Opera Theatre II	2
MUSI 336	Choral Conducting	2
MUSI 342	Vocal Repertoire I	2
MUSI 343	Vocal Repertoire II	2
MUSI 442	Vocal Studio Pedagogy and Lit	2
MUSI 495	Applied Study IV	4
THTR 120A	Introduction to Acting I	3
<b>Complete one of the following language sequences:</b>		8
FRCH 101 & FRCH 102	Elementary French I and Elementary French II	
GRMN 101 & GRMN 102	Elementary German I and Elementary German II	
ITLN 101 & ITLN 102	Elementary Italian I and Elementary Italian II	
Total Hours		29

Minimum Required Grade: C-

## Instrumental Performance Track

### Note:

- Students choosing the Instrumental Performance track must complete 4 additional credits of MUSI 195 beyond the core requirement for a total of 6 credits.
- Students choosing the Instrumental Performance track must complete 4 additional credits of MUSI 295 beyond the core requirement for a total of 6 credits.



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- Students choosing the Instrumental Performance track must complete 7 additional credits of MUSI 395 beyond the core requirement for a total of 8 credits.

CODE	TITLE	HOURS
<b>If choosing the Instrumental Performance track, complete all of the following courses:</b>		
MUSI 335	Instrumental Conducting	2
MUSI 362	Chmbr Ens III: UM	4
MUSI 195	Applied Study I	4
MUSI 295	Applied Study II	4
MUSI 395	Applied Study III	7
MUSI 495	Applied Study IV	8
Total Hours		29

Minimum Required Grade: C-

## Piano Performance Track

### Note:

- Students choosing the Piano Performance track must complete 2 additional credits of MUSI 195 beyond the core requirement for a total of 4 credits.
- Students choosing the Piano Performance track must complete 4 additional credits of MUSI 295 beyond the core requirement for a total of 6 credits.
- Students choosing the Piano Performance track must complete 7 additional credits of MUSI 395 beyond the core requirement for a total of 8 credits.

CODE	TITLE	HOURS
<b>If choosing the Piano Performance track, complete all of the following courses:</b>		
MUSI 102A	Performance Study	2
MUSI 332	Advanced Functional Piano	1
MUSI 335	Instrumental Conducting	2
or MUSI 336	Choral Conducting	
MUSI 432	Keyboard Literature	3
MUSI 433	Keyboard Literature II	3
MUSI 435	Piano Methods & Materials I	3
MUSI 436	Piano Methods & Materials II	3
MUSI 195	Applied Study I	4
MUSI 295	Applied Study II	4
MUSI 395	Applied Study III	7
MUSI 495	Applied Study IV	8
Total Hours		40

Minimum Required Grade: C-

## Organ Performance Track

**Note:**

- Students choosing the Organ Performance track must complete 4 additional credits of MUSI 195 beyond the core requirement for a total of 6 credits.
- Students choosing the Organ Performance track must complete 4 additional credits of MUSI 295 beyond the core requirement for a total of 6 credits.
- Students choosing the Organ Performance track must complete 7 additional credits of MUSI 395 beyond the core requirement for a total of 8 credits.

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CODE	TITLE	HOURS
<b>If choosing the Piano Performance track, complete all of the following courses:</b>		
MUSI 102A	Performance Study	2
MUSI 332	Advanced Functional Piano	1
MUSI 336	Choral Conducting	2
MUSI 435	Piano Methods & Materials I	3
MUSI 436	Piano Methods & Materials II	3
MUSI 195	Applied Study I	4
MUSI 295	Applied Study II	4
MUSI 395	Applied Study III	7
MUSI 495	Applied Study IV	8
MUSI 492	Independent Study (Organ Construction and Design)	2
<b>Complete one of the following language sequences:</b>		8
FRCH 101 & FRCH 102	Elementary French I and Elementary French II	
GRMN 101 & GRMN 102	Elementary German I and Elementary German II	
Total Hours		44

Minimum Required Grade: C-

## Music - Bachelor of Music Education (B.M.E)

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- [Secondary Education Licensure Program](#)
- [Licensure Degree Requirements](#)

### Bachelor of Music Education

#### College of the Arts and Media

**Degree Specific Credits:** 72

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students apply for admission during their second year. See the Department of Curriculum and Instruction in the College of Education and Human Sciences for more information.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

## University Of Montana

Technique Courses	9
Music Theory, Methods, and History	45
Marching Band	1
Applied Study	7
Concert Attendance See requirement	0
Ensemble Requirements	7
Writing Requirement for Music Education	3
Secondary Teaching Licensure	
Total Hours	72

### Technique Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSE 120	Techs: String Inst in Class I	1
MUSE 121	Techs: String Inst in Class II	1
MUSE 274	Techniques: Upper Brass	1
MUSE 275	Techniques: Lower Brass	1
MUSE 123	Techniques: Voice	1
MUSE 272	Techniquis: Flute & Single Reed	1
MUSE 273	Techniques: Double Reed	1
MUSE 126	Techs: Percussn Instruments I	1
MUSE 127	Techs: Percussn Instruments II	1
Total Hours		9

Minimum Required Grade: C-

## Music Theory, Methods, and History

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
Music Theory:		
MUSI 105	Music Theory I	2
MUSI 106	Music Theory II	2
MUSI 205	Music Theory III	2
MUSI 206	Music Theory IV	2
<b>Keyboard Skills:</b>		
MUSI 135A	Keyboard Skills I (MUSI 332 should be taken by keyboard principals)	1
or MUSI 332	Advanced Functional Piano	
MUSI 136A	Keyboard Skills II (MUSI 435 should be taken by keyboard principals)	1
or MUSI 435	Piano Methods & Materials I	
MUSI 235	Keyboard Skills III	1
MUSI 236	Keyboard Skills IV	1
MUSI 296	Piano Prof Assessment (must be completed prior to moving on to upper-division courses)	0
<b>Aural Perception:</b>		
MUSI 140	Aural Perception I	2
MUSI 141	Aural Perception II	2
MUSI 240	Aural Perception III	2
MUSI 241	Aural Perception IV	2
<b>Methods and Literature:</b>		

## University Of Montana

MUSE 333	Gen Music Methods & Materls I	2
MUSE 334	Gen Music Methods & Materls II	2
MUSI 440	Orchestration	2
MUSE 425	Technology and Materials	2
MUSE 497	Methods (Taken twice: Choral and Instrumental)	4
<b>Conducting:</b>		
MUSI 335	Instrumental Conducting	2
MUSI 336	Choral Conducting	2
<b>Music History:</b>		
MUSI 202L	Intro to Music Literature	3
MUSI 301H	Music History I	3
MUSI 302H	Music History II (This course satisfies the Intermediate Writing Requirement)	3
Total Hours		45

Minimum Required Grade: C-

## Marching Band

**Note:** String, Voice, and Keyboard principals required to take only 1 credit of MUSI 155A. Wind/percussion principals must take 2.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MUSI 155A	Marching: Grizzly Marchng Band	1-2

Minimum Required Grade: C-

## Applied Study

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 102A	Performance Study (Taken for 1 credit each in the Spring of the third year and Fall of the fourth year)	2
MUSI 195	Applied Study I (1 credit each semester in the first year of study)	2
MUSI 295	Applied Study II (1 credit each semester in the second year of study)	2
MUSI 395	Applied Study III (Taken in Fall of third year)	1
Total Hours		7

Minimum Required Grade: C-

## Concert Attendance

**Note:** All students majoring in Music are required to attend in a minimum of 100 approved recitals/concerts prior to graduation. During the 4th year in an undergraduate degree program and upon completion of this requirement, students should register for the following course:

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MUSI 388	Concert Attendance UM	0

Minimum Required Grade: C-

## Ensemble Requirements

### Lower-Division Ensemble Requirement

**Note:** All majors seeking an undergraduate degree in music and who are registered for 5 or more credits must participate in an ensemble specified by their degree curriculum each semester of residence of the regular school year. (See specific curricula for maximum ensemble credits applicable toward minimum degree requirements.) One credit must be taken each semester for two credits each year.



CODE	TITLE	HOURS
<b>Complete 4 credits in one of the following courses:</b>		4
MUSI 108A	Orchestra: UMSO (String principals)	
MUSI 112A	Choir (Voice principals)	
or MUSI 110A	Opera Theatre I	
MUSI 114A	Band: UM Concert Band (Instrumental Principals)	
MUSI 162A	Chamber Ensembles I (Piano and Guitar principals)	
Total Hours		4

Minimum Required Grade: C-

### Upper-Division Ensemble Requirement

**Note:** These are to be taken for 1 credit each semester for a total of two credits during the the third year and for 1 credit during the Fall semester of the 4th year.

CODE	TITLE	HOURS
<b>Complete 3 credits in the following courses:</b>		3
MUSI 308	Orchestras II: UM (String principals)	
MUSI 312	Choir III (Voice Principals)	
or MUSI 310	Opera Theatre II	
MUSI 314	Band III: UM Concert Band (Instrumental principals)	
MUSI 362	Chmbr Ens III: UM (Piano and Guitar principals)	
Total Hours		3

Minimum Required Grade: C-

## Writing Requirement for Music Education

### Advanced Writing Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 415	Music 20th Century to Present	
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
Total Hours		3

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach Music, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Music Minor

## Minor - Music

### College of the Arts and Media

**Degree Specific Credits:** 27

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Notes:**

- Electives are to allow for emphasis in a particular area of Music study and must include course work at the upper-division level.
- Upper-division course work normally requires a pre-requisite. Please see the University general catalog for details. Consent of instructor will be required if all prerequisites have not been met.

## Summary

Minor Requirements	15
Elective Options	12
Performance	
Theory	
Music Theory	
Composition	
Music Technology	
Total Hours	27

## Minor Requirements

**Notes:** Ensembles must be taken concurrently with MUSI 195. MUSI 195 is taken for 1 credit each semester for a total of 2 credits for the year.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 105	Music Theory I	2
MUSI 106	Music Theory II	2
MUSI 140	Aural Perception I	2
MUSI 141	Aural Perception II	2
MUSI 195	Applied Study I	2
MUSI 202L	Intro to Music Literature	3
<b>Complete 2 credits in the following courses:</b>		2
MUSI 108A	Orchestra: UMSO	
MUSI 110A	Opera Theatre I	
MUSI 112A	Choir	
MUSI 114A	Band: UM Concert Band	
MUSI 155A	Marching: Grizzly Marchng Band	
MUSI 131A	Jazz Ensemble I: UM Jazz Bands	
MUSI 162A	Chamber Ensembles I	
Total Hours		15

Minimum Required Grade: C-

## Elective Options

**Rule:** Complete one of the following minor option tracks. 12 total credits required.

### Performance

**Note:**

- MUSI 295 and MUSI 395 1 credit each semester for a year total of 2 credits. Two year total of 4 credits in these Applied Studies.
- MUSI 308-MUSI 314, MUSI 362A, MUSI 391 Ensembles for four credits must be taken concurrently with MUSI 295 and MUSI 395.

CODE	TITLE	HOURS
<b>If choosing the Performance option, complete all of the following courses:</b>		
MUSI 295	Applied Study II	2
MUSI 395	Applied Study III	2
<b>Complete 4 credits in the following courses:</b>		4
MUSI 308	Orchestras II: UM	
MUSI 310	Opera Theatre II	
MUSI 312	Choir III	
MUSI 314	Band III: UM Concert Band	
MUSI 362	Chmbr Ens III: UM	
<b>Complete 4 credits in the following courses:</b>		4
MUSI 205	Music Theory III	
MUSI 206	Music Theory IV	
MUSI 301H	Music History I	
MUSI 302H	Music History II	
Other 300-400 level performance or academic classes approved by the advisor		
Total Hours		12

Minimum Required Grade: C-

**Theory**

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 205	Music Theory III	2
MUSI 206	Music Theory IV	2
MUSI 240	Aural Perception III	2
MUSI 241	Aural Perception IV	2
MUSI 356	Form & Analysis I	2
MUSI 357	Form & Analysis II	2
Total Hours		12

Minimum Required Grade: C-

**Music History**

**Note:** Although worth 4 total credits., MUSI 205 and MUSI 206 are strongly recommended. Other courses may be substituted at the discretion of the advisor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 205	Music Theory III	2
MUSI 206	Music Theory IV	2
MUSI 301H	Music History I	3
<b>Complete 2 of the following courses:</b>		6
MUSI 415	Music 20th Century to Present	
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
Total Hours		13

Minimum Required Grade: C-

**Composition**

**Notes:**

## University Of Montana

- MUSI 180 must be taken for 1 credit per semester for a total of 4 credits,
- MUSI 280 must be taken for 1 credit per semester for a total of 4 credits,

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 135A	Keyboard Skills I	1
MUSI 180	Composition I ( )	4
MUSI 207X	World Music (equiv to 307)	3
MUSI 280	Composition II	4
Total Hours		12

Minimum Required Grade: C-

### Music Technology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUST 110	Digital Audio & Multitracking	2
MUST 210	Sequencng, Synthesis, Sampling	2
MUST 310	Interactivity Digitl Sgnl Proc	2
MUST 227A	Mtn Electroacoustc Lptp Ens I	1
MUSI 207H	World Music (equiv to 307)	3
MUST 410	Computer Music Programming	2
Total Hours		12

Minimum Required Grade: C-

## School of Journalism

### **Denise Dowling, Director**

Courses in the School of Journalism examine the news media -- emphasizing their history, privileges and ethical responsibilities -- and provide instruction in skills required for a wide array of careers that require gathering, verifying and disseminating news and information in the Digital Age. The School of Journalism offers a Bachelor of Arts in Journalism and a minor in Journalism.

Students select courses in writing, reporting, producing, directing, editing and still and video photography. They train to work across multiple platforms including online, audio, video, newspaper and magazine.

A quality education in journalism is built on a strong liberal arts foundation. Students must complete 72 credits outside of journalism, including the University's general education requirements.

For further information about the school's Master of Arts program in Environmental Science and Natural Resource Journalism, contact the

Director of Graduate Studies in Journalism, Nadia White  
School of Journalism  
University of Montana  
Missoula, MT 59812  
or (406) 243-2227.

## Lower-Division Core

In the first three or four semesters of study students take courses in the major and in the liberal arts and sciences. Journalism courses must be taken at University of Montana-Missoula, though the directors may occasionally accept substitutes taught at another school with programs accredited by the Accrediting Council for Education in Journalism and Mass Communication. All non-journalism courses in the curriculum may be completed at any college or university if transfer credits are accepted by UM. Students may enter during either autumn or spring semester.

## Upper-Division Core

Students may begin taking upper division courses after they complete the lower division prerequisites for those courses.

## Academic Progression

The general University academic standing requirements are listed separately in this catalog. See index.

Journalism majors must maintain satisfactory academic progress. Any student whose GPA falls below a 2.5 must meet with his or her advisor to discuss the student's progress before classes resume the following semester.

## Undergraduate



University Of Montana

- Journalism B.A.

## **Undergraduate Minors**

- Journalism Minor

# Journalism B.A.

## Bachelor of Arts - Journalism

### College of the Arts and Media

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Degree Specific Requirements:**

- Students must complete at least 43 and no more than 48 JRNL credits.
- Students must complete at least 72 total credits outside of Journalism.
- The school strongly recommends students complete the first-year sequence of an approved language course or equivalent by exam before applying to the professional program.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Requirements	12
Upper-Division Core Requirements	9
Capstone	3
Upper Division Electives	15
Total Hours	39

## Lower-Division Core Requirements

**Rule:** Students must maintain a 2.5 overall GPA and 2.5 GPA in the Journalism Lower-Division Core.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JRNL 100H	Media History and Literacy (Prerequisite for JRNL 270)	3
JRNL 170	Elements of News Writing (Prerequisite for JRNL 270)	3
JRNL 257A	Beginning Visual Journalism (Prerequisite for JRNL 328 and 350)	3
JRNL 270	Reporting (Co-requisite for JRNL 328 and 350; prerequisite for all other UD JRNL courses )	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Core Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JRNL 300	First Amendment and Journalism Law	3
JRNL 400	Ethics & Trends in News Media	3
JRNL 498	Supervised Internship	3
Total Hours		9

Minimum Required Grade: C-

### Capstone

**Note:** Please see your advisor for additional courses that may satisfy this requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
JRNL 410	Native News Honors Project	
JRNL 411	Reporting Native News	
JRNL 412	Montana Journalism Review	
JRNL 440	Advanced Audio	
JRNL 470	Covering Elections	
JRNL 471	Covering the Legislature	
JRNL 473	International Reporting	
JRNL 480	Advanced Video Reporting	
JRNL 481	Adv Video Photo and Directing	
JRNL 488	Student Documentary Unit	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Electives

CODE	TITLE	HOURS
<b>Complete five of the following courses:</b>		15
JRNL 328	Intermediate Photojournalism	
JRNL 330	News Editing	
JRNL 331	Intermediate Web Reporting	
JRNL 332	Social Media and Audience	
JRNL 340	Intermediate Audio	
JRNL 350	Intermediate Video Photography	

University Of Montana

JRNL 342	Multimedia Sports Announcing and Writing	
JRNL 351	Intermediate Video Directing	
JRNL 352	Intermediate Video Reporting and Producing	
JRNL 362	Feature Writing	
JRNL 370	Public Affairs Reporting	
JRNL 410	Native News Honors Project	
JRNL 411	Reporting Native News	
JRNL 412	Montana Journalism Review	
JRNL 414	Investigations	
JRNL 427	Advanced Photo & Multimedia Storytelling	
JRNL 428	Freelance Photography	
JRNL 429	Documentary Photojournalism	
JRNL 430	Print & Web Editing & Design	
JRNL 431	Online Journalism	
JRNL 432	Social Media and Audience II	
JRNL 433	Marketing Your Work	
JRNL 440	Advanced Audio	
JRNL 470	Covering Elections	
JRNL 471	Covering the Legislature	
JRNL 472	Opinion Writing	
JRNL 473	International Reporting	
JRNL 480	Advanced Video Reporting	
JRNL 481	Adv Video Photo and Directing	
JRNL 482	Advanced Video Storytelling	

University Of Montana

JRNL 488	Student Documentary Unit	
JRNL 494	Pollner Seminar	
Total Hours		15

Minimum Required Grade: C-

## Documentary Film Certificate

The certificate in documentary film provides students with the practical skills and theoretical knowledge needed to successfully communicate concepts and narratives via the modes of non-fiction filmmaking. Students will acquire a foundational knowledge of essential techniques in cinematography, editing, and sound mixing, and apply them in both journalistic and artistic ways.

The skills and knowledge gained through the completion of this certificate are applicable to many fields, and are complimentary to the work of any student seeking to communicate non-fiction narratives through visual means.

## Post-secondary Certificate - Documentary Film

### College of the Arts and Media

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	15
Total Hours	15

### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JRNL 257A or MART 251	Beginning Visual Journalism or Digital Video Production	3
JRNL 350	Intermediate Video Photography	3
JRNL 488 or MART 455	Student Documentary Unit or Visions of Documentary Film	3
JRNL 491	Documentary Film History	3
MART 345	Sound for Film	3
Total Hours		15

Minimum Required Grade: C-



# Journalism Minor

## Minor - Journalism

College of the Arts and Media

**Degree Specific Credits: 21**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Core Courses	18
Additional courses	3
Total Hours	21

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JRNL 100H	Media History and Literacy	3
JRNL 170	Elements of News Writing	3
JRNL 257A	Beginning Visual Journalism	3
JRNL 270	Reporting	3
JRNL 300	First Amendment and Journalism Law	3
JRNL 400	Ethics & Trends in News Media	3
Total Hours		18

Minimum Required Grade: C-

### Additional courses

University Of Montana

CODE	TITLE	HOURS
	<b>Complete 1 additional JRNL upper-division elective.</b>	3
Total Hours		3

Minimum Required Grade: C-

## School of Theatre and Dance

**John Kenneth DeBoer, Director**

**Heidi Jones Eggert, Associate Director**

The School of Theatre & Dance is accredited by the National Association of Schools of Theatre (NAST) and is a member of the Association for Theatre in Higher Education (ATHE) and the United States Institute for Theatre Technology (USITT). The school is housed in the Performing Arts and Radio/Television Center, which includes three theatre/dance performance spaces. The program is production-oriented with approximately ten major productions presented each year including contemporary, historical, period, musical, and experimental plays, as well as dance showcases and concerts. Montana Repertory Theatre and the CoMotion Dance Project, professional touring companies based at UM, often involve students both on and off stage. The faculty is strong, possessing a diversity of educational and professional theatre and dance backgrounds.

The Bachelor of Arts with a major in Dance allows the student who plans to enter a dance career to select another major to complement that objective. The Bachelor of Arts with a major in Theatre provides the student with a broad liberal arts education and a general focus in theatre. The degree allows the student to complete an additional major and may form the basis for further training on the graduate level. The Bachelor of Arts with a major in Theatre and an area of specialization in Education Endorsement Preparation is designed for the student seeking teaching endorsement in the field of theatre. The Bachelor of Fine Arts with a major in Dance or Theatre is a professionally oriented degree designed for the student who plans to pursue a career in theatre, dance, or a related field. Students are invited into the BFA after an audition/interview process. Areas of BFA specialization are: Acting, Design & Technology, Choreography & Performance, Musical Theatre Performance and Teaching. Graduate programs lead to the Master of Arts in Theatre with a focus on either performance theory/criticism or teaching or the Master of Fine Arts in Theatre with areas of specialization in Acting, Design & Technology, Directing, or Music Directing.

For more information on the academic programs and to learn about Theatre & Dance productions, please visit our website.

### Advisement

Each Theatre & Dance major or minor must have a faculty advisor who is assigned by the School and who is usually from the student's area. The School, through its advisement program, often recommends non-theatre and non-dance electives and specific General Education courses to the student depending on the student's area. Majors may not take core or area-required courses on a credit/no credit basis.

### Auditions and Portfolio Reviews

Actors, dancers, designers and technicians undergo periodic review in the form of auditions or portfolio presentations. These ongoing evaluations provide each student with the opportunity and challenge of individualized critiques from faculty and professional staff.

### Senior Project

## University Of Montana

A senior project is required of all students. The senior project is usually production-related and has both practical and written components. Requirements for the project vary and are outlined in the School of Theatre & Dance Student Handbook.

### Undergraduate

- Dance B.A.
- Dance B.F.A.
- Theatre B.A.
- Theatre B.F.A. - Acting
- Theatre B.F.A. – Design & Technology
- Theatre B.F.A. - Concentration in Musical Theatre Performance

### Undergraduate Minors

- Dance
- Dance Specialization Education
- Theatre
- Theatre Education

University Of Montana

## Dance B.A.

### Bachelor of Arts - Dance

College of the Arts and Media

**Degree Specific Credits:** 53-60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** There is an Admission Audition that prospective majors must pass during the first year to continue in the program.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

University Of Montana

Lower-Division Core	26-28
Required Courses	
Costuming Experience	
Ballet Experience I	
Jazz Experience I	
Upper-Division Core	20
Required Courses	
Modern Experience I	
Performance Experience	
Junior Project	
Senior Project	
Major Electives	7-12
Technique Experience II	
Elective Courses	
Total Hours	53-60

**Lower-Division Core**

**Rule:** Complete the following subcategories. 26 total credits required.

**Required Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 165A	Dance Forms: African	3
DANC 194	Seminar/Workshop	1
DANC 200A	Contemporary Modern II	2
DANC 220	Creative Practice I	2
THTR 102A	Introduction to Theatre Design	3
THTR 103	Introduction to House Management	1
THTR 106	Theatre Production I: Run Crew	1
Total Hours		13

Minimum Required Grade: C-

#### Shop Experience

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		3
THTR 107A	Theatre Production I: Construction Crew	
Total Hours		3

Minimum Required Grade: C-

#### Ballet Experience I

CODE	TITLE	HOURS
<b>Complete 6-7 credits in the following courses (three semesters):</b>		6-7
DANC 110A	Introduction to Ballet	
DANC 210A	Ballet II	
DANC 310	Ballet III	
DANC 410	Ballet IV	
Total Hours		6-7

# University Of Montana

Minimum Required Grade: C-

## Jazz Experience I

CODE	TITLE	HOURS
Complete 4-5 credits in the following courses (two semesters):		4-5
DANC 115A	Introduction to Jazz Dance	
DANC 215A	Jazz Dance II	
DANC 315	Jazz III	
Total Hours		4-5

Minimum Required Grade: C-

## Upper-Division Core

**Rule:** Complete the following subcategories. 20 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 305	Contact Improvisation	2
DANC 334	Dance History	2
DANC 494	Junior/Senior Seminar	3
Total Hours		7

Minimum Required Grade: C-

## Modern Experience I



University Of Montana

CODE	TITLE	HOURS
<b>Complete 9 credits in the following courses (three semesters):</b>		9
DANC 300	Contemporary Modern III	
DANC 400	Contemporary Modern IV	
DANC 404	Advanced Contemporary Modern	
Total Hours		9

Minimum Required Grade: C-

**Performance Experience**

**Note:** Registration and credit load based on casting for Theatre & Dance productions. Performing in one piece equals one credit.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		2
DANC 327	Advanced Rehearsal and Performance	
Total Hours		2

Minimum Required Grade: C-

**Junior Project**

**Note:** Junior projects must be planned with the student's project advisor and all journals and papers will be submitted to that advisor.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 399	Junior Creative Research Project	1
Total Hours		1

Minimum Required Grade: C-

**Senior Project**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 499	Senior Thesis/Creative Project	1
Total Hours		1

Minimum Required Grade: C-

## Major Electives

**Rule:** Complete the following subcategories. 7-12 total credits required.

### Technique Experience II

CODE	TITLE	HOURS
<b>Complete 4-6 credits in the following courses (two semesters):</b>		4-6
DANC 215A	Jazz Dance II	
DANC 300	Contemporary Modern III	
DANC 310	Ballet III	
Total Hours		4-6

Minimum Required Grade: C-

### Elective Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		3-6
DANC 295	Student Teaching: Children's Dance	
DANC 320	Creative Practice II	
DANC 360L	World Dance	
DANC 380	Science of Dance Movement	
DANC 406	Dance as a Healing Art	
DANC 440	Dance Pedagogy	
DANC 497	Methods: Teaching Movement in Schools	
THTR 220	Acting I	
Total Hours		3-6

Minimum Required Grade: C-

University Of Montana

## Dance B.F.A.

### Bachelor of Fine Arts - Dance

College of the Arts and Media

**Degree Specific Credits:** 79-83

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students who intend to pursue the Bachelor of Fine Arts will normally enter the University as Bachelor of Arts students in Dance. There is an Admission Audition that prospective majors must pass during the first year to continue in the program.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

University Of Montana

Lower-Division Core	22
Required Courses	
Costuming Experience	
Jazz Experience	
Production Experience I	
Community Experience	
Upper-Division Core	32
Advising Track	25-29
Required Courses	
Ballet Experience	
Stage Management Course	
Junior Project	
Senior Project	
Choreography & Performance Track	
Teaching Track	
Total Hours	79-83

**Lower-Division Core**

**Rule:** Complete the following subcategories. 22 total credits required.

**Required Courses**

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 165A	Dance Forms: African	3
DANC 194	Seminar/Workshop	1
DANC 200A	Contemporary Modern II	2
DANC 220	Creative Practice I	2
DANC 295	Student Teaching: Children's Dance	1
THTR 102A	Introduction to Theatre Design	3
THTR 106	Theat Prod I: Run Crew	1
Total Hours		13

Minimum Required Grade: C-

**Costuming Experience**

**Note:** For THTR 107A: choose either Section 02: Costume Shop on MW or Section 05: Costume Shop on TR.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 107A	Theat Prod I: Constr Crew (either Section 02 or 05)	
THTR 245	Int Costume Construction	
Total Hours		3

Minimum Required Grade: C-

**Jazz Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2
DANC 215A	Jazz Dance II	
DANC 315	Jazz III	
Total Hours		2

## University Of Montana

Minimum Required Grade: C-

### Production Experience I

**Note:** Registration and credit load based on casting for Theatre & Dance productions. Performing in one piece equals one credit. May be taken credit/no credit.

CODE	TITLE	HOURS
<b>Complete 2 credits of the following course (two semesters):</b>		2
DANC 225	Rehearsal & Performance	
Total Hours		2

Minimum Required Grade: C-

### Community Experience

CODE	TITLE	HOURS
<b>Complete 2 credits of the following course (two semesters):</b>		2
DANC 227	Community Dance Initiatives	
Total Hours		2

Minimum Required Grade: C-

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## Upper-Division Core

**Rule:** Complete the following subcategories.

### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 305	Contact Improvisation	2
DANC 334	Dance History	2
DANC 360L	World Dance	3
DANC 380	Science of Dance Movement	3
DANC 406	Dance as a Healing Art	2
DANC 440	Dance Pedagogy	2
DANC 494	Junior/Senior Seminar	3
Total Hours		17

Minimum Required Grade: C-

**Ballet Experience**

CODE	TITLE	HOURS
Complete 12 credits in the following courses (six semesters):		12
DANC 310	Ballet III	
DANC 410	Ballet IV	
Total Hours		12

Minimum Required Grade: C-

**Stage Management Course**

**Note:** Registration will be based on production assignment as determined by Dance faculty.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 329	Dance Stage Management Practicum	1
Total Hours		1

Minimum Required Grade: C-

**Junior Project**



## University Of Montana

**Note:** Junior projects must be planned with the student's project advisor and all journals and papers will be submitted to that advisor. All choreography and performance BFA candidates are required to choreograph for their junior projects.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 399	Jr Creat/Research Proj	1
Total Hours		1

Minimum Required Grade: C-

### Senior Project

**Note:** Senior projects must be planned with the student's project advisor and all journals and papers will be submitted to that advisor.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 499	Senior Thesis/Creative Project	1
Total Hours		1

Minimum Required Grade: C-

## Advising Tracks

### Choreography & Performance Track

**Note:** This is an advising track only and not an official program as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

**Rule:** Complete the following subcategories. 29 total credits required.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACT 250	Pilates (May be taken credit/no credit)	1
DANC 320	Creative Practice II	2
DANC 405	Advanced Improvisation	2
Total Hours		5

Minimum Required Grade: C-

**Production Experience II**

**Note:** Registration and credit load based on casting for Theatre & Dance productions. Performing in one piece equals one credit.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		2
DANC 327	Advanced Rehearsal and Performance	
Total Hours		2

Minimum Required Grade: C-

**Modern Experience II**

CODE	TITLE	HOURS
<b>Complete 6 credits in the following course (two semesters):</b>		6
DANC 300	Contemporary Modern III	
Total Hours		6

Minimum Required Grade: C-

**Modern Experience III**

CODE	TITLE	HOURS
<b>Complete 6 credits in the following course (two semesters):</b>		6
DANC 400	Contemporary Modern IV	
Total Hours		6

## University Of Montana

Minimum Required Grade: C-

### Modern Experience IV

CODE	TITLE	HOURS
Complete 6 credits in the following course (two semesters):		6
DANC 400	Contemporary Modern IV	
Total Hours		6

Minimum Required Grade: C-

### Cross-Training Elective

**Note:** May be taken credit/no credit.

CODE	TITLE	HOURS
Complete one credit in any ACT course chosen with your advisor.		1
Total Hours		1

Minimum Required Grade: C-

### Acting Experience

CODE	TITLE	HOURS
Complete the following course:		
THTR 220	Acting I	3
Total Hours		3

Minimum Required Grade: C-

## Teaching Track

**Note:** This is an advising track only and not an official program as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

**Rule:** Complete the following subcategories. 25 total credits required.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 320	Creative Practice II	2
DANC 345	New Visions Dance	1
Total Hours		3

Minimum Required Grade: C-

### Teaching Assistant Experience

**Note:** Completion of these two credits must include serving as teaching assistant for at least one 100-level technique course offered in DANC rubric on campus. It is optional to earn credits through the Flagship Program.

CODE	TITLE	HOURS
<b>Complete 2 credits in the following course:</b>		2
DANC 446	Teaching Projects	
Total Hours		2

Minimum Required Grade: C-

### In-Schools Experience

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 497	Methods: Tchng Movmnt in Schls	2
Total Hours		2

Minimum Required Grade: C-

### Modern Experience II

University Of Montana

CODE	TITLE	HOURS
<b>Complete 18 credits in the following courses (six semesters):</b>		18
DANC 300	Contemporary Modern III	
DANC 400	Contemporary Modern IV	
Total Hours		18

Minimum Required Grade: C-

Secondary Teaching Licensure

**Note:** For endorsement to teach Dance, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Dance Education Minor

## Minor - Dance Education

### College of the Arts and Media

**Degree Specific Credits:** 22-24

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Individuals completing this minor in Dance Education must also complete the teaching track of a major in another content area. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education for more information.

## Summary

Lower-Division Core	6
Composition	
Community Experience	
Student Teaching Experience I	
Upper-Division Core	16-18
Required Courses	
Student Teaching Experience II	
In-Schools Experience	
Technique Experience I	
Technique Experience II	
Total Hours	22-24

### Lower-Division Core

**Rule:** Complete the following subcategories. 6 total credits required.

**Composition**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 220	Creative Practice I	2
Total Hours		2

Minimum Required Grade: C-

**Community Experience**

CODE	TITLE	HOURS
<b>Complete 2 credits of the following course:</b>		2
DANC 227	Community Dance Initiatives	
Total Hours		2

Minimum Required Grade: C-

**Student Teaching Experience I**

CODE	TITLE	HOURS
<b>Complete 2 credits of the following course:</b>		2
DANC 295	Student Teaching: Children's Dance	
Total Hours		2

Minimum Required Grade: C-

**Upper-Division Core**

**Required Courses**

**Rule:** Complete the following subcategories. 16-18 total credits required.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 360L	World Dance	3
DANC 440	Dance Pedagogy	2
Total Hours		5

Minimum Required Grade: C-

**Student Teaching Experience II**

CODE	TITLE	HOURS
Complete 2 credits of the following course:		2
DANC 345	New Visions Dance	
Total Hours		2

Minimum Required Grade: C-

**In-School Experience**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 497	Methods: Tchng Movmnt in Schls	2
Total Hours		2

Minimum Required Grade: C-

**Technique Experience I**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 300	Contemporary Modern III	3
DANC 310	Ballet III	3
Total Hours		6

Minimum Required Grade: C-

**Technique Experience II**



## University Of Montana

**Note:** Other Social, Cultural/World, or Traditional/Indigenous technique courses may meet this requirement with the approval of the program.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		1-3
DANC 160A	Dance Forms: Irish	
DANC 165A	Dance Forms: African	
DANC 315	Jazz III	
Total Hours		1-3

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach Dance, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Dance Minor

## Minor - Dance

College of the Arts and Media

**Degree Specific Credits:** 25-35

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core	21-27
Composition	
Modern Experience I	
Ballet Experience I	
Jazz Experience	
Technique Experience	
Costume Experience	
Upper-Division Core	2
Minor Electives	2-6
Total Hours	25-35

### Lower-Division Core

**Rule:** Complete the following subcategories. 21-27 total credits required.

#### Composition

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 220	Creative Practice I	2
Total Hours		2

Minimum Required Grade: C-

**Modern Experience I**

CODE	TITLE	HOURS
<b>Complete 6-9 credits in the following courses (three semesters):</b>		6-9
DANC 100A	Introduction to Modern Dance	
DANC 200A	Contemporary Modern II	
DANC 300	Contemporary Modern III	
DANC 400	Contemporary Modern IV	
DANC 404	Advanced Contemporary Modern	
Total Hours		6-9

Minimum Required Grade: C-

**Ballet Experience I**

CODE	TITLE	HOURS
<b>Complete 6-7 credits in the following courses (three semesters):</b>		6-7
DANC 110A	Introduction to Ballet	
DANC 210A	Ballet II	
DANC 310	Ballet III	
DANC 410	Ballet IV	
Total Hours		6-7

Minimum Required Grade: C-

**Jazz Experience**

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 115A	Introduction to Jazz Dance	
DANC 215A	Jazz Dance II	
DANC 315	Jazz III	
Total Hours		2-3

Minimum Required Grade: C-

**Technique Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 165A	Dance Forms: African	
DANC 200A	Contemporary Modern II	
DANC 210A	Ballet II	
DANC 215A	Jazz Dance II	
Total Hours		2-3

Minimum Required Grade: C-

**Costume Experience**

**Note:** For THTR 107A: choose either Section 02: Costume Shop on MW or Section 05: Costume Shop on TR.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 102A	Introduction to Theatre Design	
THTR 107A	Theat Prod I: Constr Crew (Section 02 or 05)	
THTR 245	Int Costume Construction	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Core

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 334	Dance History	2
Total Hours		2

Minimum Required Grade: C-

### Minor Electives

**Note:** ACT 250 may be taken credit/no credit

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		2-6
ACT 250	Pilates	
DANC 227	Community Dance Initiatives	
DANC 295	Student Teaching: Childrens Dance	
DANC 305	Contact Improvisation	
DANC 360L	World Dance	
DANC 380	Science of Dance Movement	
DANC 406	Dance as a Healing Art	
Total Hours		2-6

Minimum Required Grade: C-

# Theatre B.A.

## Bachelor of Arts - Theatre

College of the Arts and Media

**Degree Specific Credits:** 44-48

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core	19
Required Courses	
Shop Experience I	
Upper-Division Core	10
Required Courses	
Senior Project	
Advising Tracks	15-19
Bachelor of Arts in Theatre Track	
Theatre Education Endorsement Preparation Track	
Total Hours	44-48

## Lower-Division Core

**Rule:** Complete the following subcategories. 18 total credits required.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 102A	Introduction to Theatre Design	3
THTR 103	Introduction to House Management	1
THTR 106	Theatre Production I: Run Crew	1
THTR 194	Freshman Seminar	1
THTR 202	Stagecraft I	3
THTR 206	Theatre Production II: Run Crew	1
THTR 220	Acting I	3
THTR 235L	Dramatic Literature	3
Total Hours		16

Minimum Required Grade: C-

### Shop Experience I

**Note:** Students may select one of the following sections:

- Scene Shop
- Costume Shop
- Light Shop

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theatre Production I: Construction Crew	3
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Core

**Rule:** Complete the following subcategories. 10 total credits required.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 330H	Theatre History I	3
THTR 331	Theatre History II	3
THTR 375	Directing I	3
Total Hours		9

Minimum Required Grade: C-

### Senior Project

**Note:** This course must be taken during student's final semester.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 499	Senior Project (take during final semester)	1
Total Hours		1

Minimum Required Grade: C-

## Bachelor of Arts in Theatre Track

**Rule:** Complete the following subcategories. 15 total credits required.

### Shop Experience II

- Students may select one of the following sections:
  - Scene Shop
  - Costume Shop
  - Light Shop
- Students must take different shop section than the one taken for the lower-division core requirement.
- This is an advising track only and not an official program as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.



CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theatre Production I: Construction Crew	3
Total Hours		3

Minimum Required Grade: C-

**Focus Area (acting, costumes, literature/history, scenery, etc.)**

**Note:** Art, Dance, Media Arts, Music, and/or Theatre courses may count toward these required electives with approval from advisor.

CODE	TITLE	HOURS
<b>Complete 12 credits in the following areas:</b>		12
Art (ART)		
Art History (ARTH)		
Dance (DANC)		
Media Arts (MAR or MART)		
Music (MUSI, MUSE, or MUST)		
Theatre (THTR)		
Total Hours		12

Minimum Required Grade: C-

## Theatre Education Endorsement Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements

## University Of Montana

- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- This major does not qualify as a single field endorsement. Individuals must complete the teaching track of a second major or minor in another teaching content area. The demand in Montana high schools for teaching of courses in this field is limited. The required second endorsement should be in a field in high demand.

### Theatre Education Endorsement Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 210	Voice & Speech I	3
THTR 221	Acting II	3
THTR 249	Stage Makeup I	1
THTR 320	Acting III	3
THTR 349	Stage Makeup II	1
THTR 370	Stage Management I	2
THTR 371	Stage Management Practice I	1-3
THTR 439	Methods of Teaching Theatre	3
Total Hours		17-19

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach Theatre, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

University Of Montana

## Theatre B.F.A. - Acting

### Bachelor of Fine Arts - Theatre; Acting Concentration

College of the Arts and Media

**Degree Specific Credits:** 74-76

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students who intend to pursue the Bachelor of Fine Arts in Theatre in the Acting or Design & Technology tracks will normally enter the University as Bachelor of Arts students in Theatre. Students who intend to pursue the Bachelor of Fine Arts in Theatre with a concentration in Musical Theatre Performance will normally enter the University as probationary Bachelor of Fine Arts students in Theatre; their status will be reevaluated at the mid-program audition at the end of their third semester.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

University Of Montana

Lower-Division Core		15
Required Courses		
Shop Experience I		
First-Year Seminar		
Upper-Division Core		6
Theatre History		
Advanced Writing		
Acting Concentration		53-55
Required Courses		
Senior Project		
Voice Course		
Staging Experience		
Production Experience		
Lower-Division Enrichment Electives		
Upper-Division Enrichment Electives		
Total Hours		74-76

**Lower-Division Core**

**Rule:** Complete the following subcategories. 15 total credits required.

**Required Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 103	Introduction to House Management	1
THTR 106	Theatre Production I: Run Crew	1
THTR 202	Stagecraft I	3
THTR 220	Acting I	3
THTR 235L	Dramatic Literature	3
Total Hours		11

Minimum Required Grade: C-

### Shop Experience I

**Note:** Students may select one of the following shop sections:

- Scene Shop
- Costume Shop
- Light Shop

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theatre Production I: Construction Crew	3
Total Hours		3

Minimum Required Grade: C-

### First-Year Seminar

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		1
C&I 194	Freshman Seminar I	
DANC 194	Seminar/Workshop	
THTR 194	Seminar/ Workshop	
Total Hours		1

Minimum Required Grade: C-

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## Upper-Division Core

### Theatre History

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 330H	Theatre History I	3
Total Hours		3

Minimum Required Grade: C-

### Advanced Writing

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
THTR 331	Theatre History II	
Total Hours		3

Minimum Required Grade: C-

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## Acting Concentration

**Note:** Students who intend to pursue the Acting concentration will normally enter the University as pre-Bachelor of Fine Arts students in Theatre with a concentration in Acting. They should then declare intent to pursue the BFA degree no later than the beginning of the second year of a four-year program. Admission is granted by audition in the second year at the end of the third semester.

**Rule:** Complete the following subcategories. 54-56 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 100A	Introduction to Modern Dance	3
MAR 470	Advanced Acting for Film I	3
THTR 206	Theatre Production II: Run Crew	1
THTR 210	Voice & Speech I	3
THTR 211	Voice & Speech II	3
THTR 221	Acting II	3
THTR 249	Stage Makeup I	1
THTR 315	Movement for the Actor I	3
THTR 320	Acting III	3
THTR 321	Advanced Acting: Practitioners	3
THTR 415	Stage Combat	3
THTR 420	Advanced Acting: Comedy Styles	3
THTR 421	Advanced Acting: Shakespeare	3
THTR 425	Advanced Acting: Devising	3
THTR 484	Advanced Acting: Professional Skills	1
Total Hours		39

Minimum Required Grade: C-

**Senior Project**

**Note:** This course must be taken during student's final semester.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 499	Senior Project	1
Total Hours		1

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Minimum Required Grade: C-

## Voice Course

CODE	TITLE	HOURS
<b>Complete three credits from the following courses:</b>		3
THTR 310	Voice and Speech III	
THTR 311	Voice and Speech IV: Poetic Language	
MUSI 102A	Performance Study	
MUSI 110A	Opera Theatre I	
MUSI 111A	Group Voice Class	
MUSI 112A	Choir	
MUSI 162A	Chamber Ensembles I	
MUSI 195	Applied Study I	
MUSI 295	Applied Study II	
MUSI 310	Opera Theatre II	
MUSI 362	Chamber Ensembles III: UM	
MUSI 395	Applied Study III	
MUSI 495	Applied Study IV	
Modern and Classical Language		
Total Hours		3

Minimum Required Grade: C-

## Staging Experience



## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
THTR 370	Stage Management I	
THTR 375	Directing I	
Total Hours		2-3

Minimum Required Grade: C-

### Production Experience

**Note:** Registration based on casting for Theatre & Dance productions.

CODE	TITLE	HOURS
<b>Complete three credits of the following course:</b>		3
THTR 395	Practicum	
Total Hours		3

Minimum Required Grade: C-

### Lower-Division Enrichment Electives

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 220	Creative Practice I	
MART 112A	Introduction to Film Editing	
THTR 102A	Introduction to Theatre Design	
THTR 207	Theatre Production II: Construction Crew	
THTR 245	Int. Costume Construction	
THTR 264	Master Electrician	
Total Hours		2-3

Minimum Required Grade: C-

### Upper-Division Enrichment Electives

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CODE	TITLE	HOURS
<b>Complete 3 credits in the following areas:</b>		3
Art (ARTZ)		
Art History (ARTH)		
Creative Writing (CRWR)		
Dance (DANC)		
Global Leadership (GBLD)		
Honors (HONR)		
Literature (LIT)		
Media Arts (MAR or MART)		
Music (MUSI, MUSE, or MUST)		
Theatre (THTR)		
Total Hours		3

Minimum Required Grade: C-

## Theatre B.F.A. - Design & Technology

### Bachelor of Fine Arts - Theatre; Design & Technology Concentration

College of the Arts and Media

**Degree Specific Credits:** 76

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students who intend to pursue the Design and Technology concentration will normally enter the University as pre-Bachelor of Fine Arts students in Theatre with a concentration in Acting; their status will be reevaluated at the BFA portfolio presentation at the end of their second semester.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

University Of Montana

Lower-Division Core		15
Required Courses		
Shop Experience I		
First-Year Seminar		
Upper-Division Core		6
Theatre History		
Advanced Writing		
Design & Technology Concentration		55
Required Courses		
Shop Experiences		
Upper-Division Drafting Requirement		
Junior Project		
Senior Project		
Design & Technology Electives		
Total Hours		76

**Lower-Division Core**

**Rule:** Complete the following subcategories. 15 total credits required.

**Required Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 103	Introd to House Management	1
THTR 106	Theat Prod I: Run Crew	1
THTR 202	Stagecraft I	3
THTR 220	Acting I	3
THTR 235L	Dramatic Literature	3
Total Hours		11

Minimum Required Grade: C-

### Shop Experience I

**Note:** Students may select one of the following shop sections:

- Scene Shop
- Costume Shop
- Light Shop

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theat Prod I: Constr Crew	3
Total Hours		3

Minimum Required Grade: C-

### First-Year Seminar

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		1
C&I 194	Freshman Seminar I	
DANC 194	Seminar/Workshop	
THTR 194	Seminar/ Workshop	
Total Hours		1

Minimum Required Grade: C-

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## Upper-Division Core

### Theatre History

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 330H	Theatre History I	3
Total Hours		3

Minimum Required Grade: C-

### Advanced Writing

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
THTR 331	Theatre History II	
Total Hours		3

Minimum Required Grade: C-

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## Design & Technology Concentration

### Notes:

- Students who intend to pursue the Design & Technology concentration will normally enter the University as pre-Bachelor of Fine Arts students in Theatre with a concentration in Design & Technology. They should then declare intent to pursue the BFA degree no later than the beginning of the second year of a four-year program. Students wishing to pursue a BFA in Theatre in the Design & Technology concentration must:
  - Complete a one-year residency at the UM-Missoula campus which includes a minimum of 12 credits in Design & Technology.
  - Attain a cumulative 2.5 overall GPA and a 3.0 GPA in Design & Technology coursework.
  - Present a theatre resume and portfolio consisting of class and production work.

## University Of Montana

- Prepare a written statement explaining their educational and professional goals.

**Rule:** Complete the following subcategories. 55 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 102A	Introduction to Theatre Design	3
THTR 155	Drawing Fundamntls for Theatre	3
THTR 206	Theat Prod II: Run Crew	1
THTR 255	Drafting for Theatre I	3
THTR 370	Stage Management I	2
Total Hours		12

Minimum Required Grade: C-

### Shop Experiences

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
<b>Shop Experience II and III - Complete 2 of the following: Scene Shop, Costume Shop, or Light Shop</b>		
THTR 107A	Theat Prod I: Constr Crew	6
<b>Shop Experience IV - Select shop in primary area of emphasis after completing Shop Experiences I-III.</b>		
THTR 307	Production Construction I	3
Total Hours		9

Minimum Required Grade: C-

### Upper-Division Drafting Requirement

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 345	Flat Pattern Des & Drafting	
THTR 355	Computer Aid Draft & Appl	
Total Hours		3

Minimum Required Grade: C-

### Junior Project

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2
THTR 308	Production Team I	
THTR 309	Production Design I	
Total Hours		2

Minimum Required Grade: C-

### Senior Project

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 408	Production Team II	
THTR 409	Production Design II	
Total Hours		3

Minimum Required Grade: C-

### Design & Technology Electives

#### Notes:

- Courses should be selected based on primary and secondary areas of interest in consultation with an advisor.
- A minimum of 12 credits must be upper-division.



University Of Montana

CODE	TITLE	HOURS
	<b>Complete 26 elective credits in consultation with an advisor. 12 credits must be upper-division.</b>	26
Total Hours		26

Minimum Required Grade: C-

# Theatre B.F.A. - Musical Theatre Performance

## Bachelor of Fine Arts - Theatre; Musical Theatre Concentration

College of the Arts and Media

**Degree Specific Credits:** 87-90

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students who intend to pursue the Bachelor of Fine Arts in Theatre will normally enter the University as Bachelor of Arts students in Theatre. Students who intend to pursue the Bachelor of Fine Arts in Theatre with a concentration in Musical Theatre Performance will enter the University as probationary Bachelor of Fine Arts students; their status will be reevaluated at the mid-program audition at the end of their third semester.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core	11
Upper-Division Core	6
Musical Theatre Performance Concentration:	
Theatre Courses	21
Music Courses	13
Music Applied Study	16
Dance Courses	18-21
Capstone Experience	1
Total Hours	86-89

## Lower-Division Core

## University Of Montana

**Rule:** Complete the following subcategories. 15 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 103	Introduction to House Management	1
THTR 106	Theatre Production I: Run Crew	1
THTR 202	Stagecraft I	3
THTR 220	Acting I	3
THTR 235L	Dramatic Literature	3
Total Hours		11

Minimum Required Grade: C-

### Shop Experience I

**Note:** Students may select one of the following shop sections:

- Scene Shop
- Costume Shop
- Light Shop

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theatre Production I: Construction Crew	3
Total Hours		3

Minimum Required Grade: C-

### First-Year Seminar

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		1
COLS 194	Freshman Seminar I	
DANC 194	Seminar/Workshop	
THTR 194	Seminar/ Workshop	
Total Hours		1

Minimum Required Grade: C-

## Upper-Division Core

### Theatre History

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 330H	Theatre History I	3
Total Hours		3

Minimum Required Grade: C-

### Advanced Writing

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
MUSI 416	Topics in Music History	
MUSI 417	Cultural Studies in Music	
THTR 331	Theatre History II	
Total Hours		3

Minimum Required Grade: C-

## Musical Theatre Performance Concentration

**Notes:**

## University Of Montana

- Students who intend to pursue the Musical Theatre Performance concentration will normally enter the University as probationary Bachelor of Fine Arts students in Theatre with a concentration in Musical Theatre Performance. They should declare intent to pursue the BFA degree no later than the beginning of the second year of the four-year program. Final admission is granted by audition in the second year at the end of the third semester.
- In order to maintain healthy practice, students must take at least one singing and dance technique course each semester in the program. Introductory courses will include an initial skill assessment to determine the appropriate placement level.

**Rule:** Complete the following subcategories.

### Theatre Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 210	Voice & Speech I	3
THTR 221	Acting II	3
THTR 249	Stage Makeup I	1
THTR 320	Acting III	3
THTR 321	Advanced Acting: Practitioners	3
THTR 322	Musical Theatre Audition Techniques	2
THTR 395	Practicum	3
THTR 410	Advanced Acting: Musical Theatre	2
THTR 484	Adv Acting: Professional Skills	1
Total Hours		21

Minimum Required Grade: C-

### Music Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 105	Music Theory I	2
MUSI 106	Music Theory II	2
MUSI 112A	Choir	2
MUSI 135A	Keyboard Skills I	1
MUSI 136A	Keyboard Skills II	1
MUSI 140	Aural Perception I	2
MUSI 141	Aural Perception II	2
MUSI 362	Chamber Ensembles III: UM	1
Total Hours		13

Minimum Required Grade: C-

## Music Applied Study

**Note:** Students must take two credits of Applied Study each semester.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MUSI 195	Applied Study I	4
MUSI 295	Applied Study II	4
MUSI 395	Applied Study III	4
MUSI 495	Applied Study IV	4
Total Hours		16

Minimum Required Grade: C-

## Dance Courses

### Dance Composition

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
DANC 220	Creative Practice I	2
Total Hours		2

Minimum Required Grade: C-

**Modern Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 100A	Introduction to Modern Dance	
DANC 200A	Contemporary Modern II	
DANC 300	Contemporary Modern III	
DANC 400	Contemporary Modern IV	
DANC 404	Advanced Contemporary Modern	
Total Hours		2-3

Minimum Required Grade: C-

**Ballet Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 110A	Introduction to Ballet	
DANC 210A	Ballet II	
DANC 310	Ballet III	
DANC 410	Ballet IV	
Total Hours		2-3

Minimum Required Grade: C-

**Jazz Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		2-3
DANC 115A	Introduction to Jazz Dance	
DANC 215A	Jazz Dance II	
DANC 315	Jazz III	
Total Hours		2-3

Minimum Required Grade: C-

### Technique Experiences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
DANC 108A	Dance Forms (Tap)	1
DANC 217	Musical Theatre Styles	2
Total Hours		3

Minimum Required Grade: C-

### Dance Electives

**Note:** Course should be selected based on primary and secondary areas of interest in consultation with an advisor.

CODE	TITLE	HOURS
<b>Complete 4 elective DANC credits in consultation with an advisor.</b>		4
Total Hours		4

Minimum Required Grade: C-

### Capstone Experience

**Note:** This course must be taken during student's final semester.



University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 499	Senior Project	1
Total Hours		1

Minimum Required Grade: C-

# Theatre Education Minor

## Minor - Theatre Education

### College of the Arts and Media

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Individuals completing this minor in Theatre Education must also complete the teaching track of a major in another content area. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education for more information.

## Summary

Lower-Division Core	10
Upper-Division Core	11
Total Hours	21

## Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 106	Theat Prod I: Run Crew	1
THTR 202	Stagecraft I	3
THTR 220	Acting I	3
THTR 235L	Dramatic Literature	3
Total Hours		10

Minimum Required Grade: C-

## Upper-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
THTR 330H	Theatre History I	3
THTR 370	Stage Management I	2
THTR 375	Directing I	3
THTR 439	Methods of Teaching Theatre	3
Total Hours		11

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach Theatre, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Theatre Minor

## Minor - Theatre

College of the Arts and Media

**Degree Specific Credits:** 22

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core	7
Shop Experience	
Introductory/Foundational Experience	
Production Experience	
Theory/Literature/History Experience	3
Theatre Minor Focus Area	12
Total Hours	22

### Lower-Division Core

**Rule:** Complete the following subcategories. 7 total credits required.

#### Shop Experience

**Note:** When registering for THTR 107A, students may select one of the following sections:

- Scene Shop, Section 01 or 04
- Costume Shop, Section 02 or 05
- Light Shop, Section 03 or 06

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
THTR 107A	Theat Prod I: Constr Crew	3
Total Hours		3

Minimum Required Grade: C-

**Introductory/Foundational Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 101L	Introduction to Theatre	
THTR 102A	Introduction to Theatre Design	
THTR 113A	Introduction to Voice Acting	
THTR 120A	Introduction to Acting I	
Total Hours		3

Minimum Required Grade: C-

**Production Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		1
THTR 103	Introd to House Management	
THTR 106	Theat Prod I: Run Crew	
THTR 395	Practicum	
Total Hours		1

Minimum Required Grade: C-

**Theory/Literature/History Experience**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
THTR 202	Stagecraft I	
THTR 235L	Dramatic Literature	
THTR 330H	Theatre History I	
THTR 331	Theatre History II	
Total Hours		3

Minimum Required Grade: C-

### Theatre Minor Focus Area

**Note:** An advisor in Theatre & Dance must be consulted for guidelines regarding one's specific focus. Dance, Media Arts, or Music courses may count toward these required electives with approval from advisor.

CODE	TITLE	HOURS
<b>Complete 12 credits in a focus area (acting, costumes, literature/history, scenery, etc.) selected with your advisor. 8 of these credits must be upper-division.</b>		12
Total Hours		12

Minimum Required Grade: C-

## School of Visual and Media Arts

### Art

#### **Kevin Bell, Director**

The School of Art provides a comprehensive education in studio art, including intensive hands-on studio practice, art history, criticism, and theory. Programs provide thorough professional training for students interested in careers in the field of art.

Degree offerings include the B.A., B.F.A., M.A., and M.F.A. in Art. Areas of specialization are Ceramics, Drawing, Painting, Photography, Printmaking and Sculpture. An M.A. degree in Art with concentrations in Studio Art and/or Art History is also offered, as well as courses that prepare students for licensure for teaching art.

### Media Arts

#### **Mark Shogren, Director**

The School of Media Arts has degree programs at both undergraduate and graduate levels. The undergraduate program offers a B.A. degree that consists of a uniquely integrated curriculum centered in digital technology as a storytelling and artistic medium. The course of instruction is comprehensive and combines the areas of digital filmmaking and integrated digital media. The undergraduate program also offers a B.F.A. degree with specializations in

- Digital Filmmaking,
- Integrated Digital Media

The graduate program offers an M.F.A., which provides an intensive, dedicated program in either Digital Filmmaking or Integrated Digital Media. The Digital Filmmaking track offers the student comprehensive training in the areas of writing, directing and editing. The Integrated Digital Media track focuses on the areas of digital compositing, digital image design, animation, and interactive digital media. In addition, the School has a comprehensive Media Arts Minor program and a substantial number of on-line courses and elective summer classes that provide students the opportunity to enhance the artistic part of their educational experience. For more information on the academic programs and to experience the creative work of Media Arts undergraduate and graduate students please visit the Media Arts website.

### Advanced Placement Policy

All students, including those who have taken AP examinations, must submit a portfolio to challenge art classes. Undergraduate students may challenge foundations courses only ARTZ 105A; ARTZ 106A; and ARTZ 108A.

Portfolios are reviewed at the beginning of each semester. The challenge process waives the requirement to take a specific class, but does not provide any credits. The process of portfolio reviews is as follows:

## University Of Montana

- students submit a portfolio of ten .jpeg files or pieces of actual work to the school office two weeks prior to the beginning of the semester.
- If challenging more than one course, students submit examples of work for each course, for example:
  - ten drawing samples for ARTZ 105A ,
  - ten color works for ARTZ 106A, and/or
  - ten 3-D pieces for ARTZ 108A.

## Transfer Students

Students with transfer credits from another institution must contact the school director for review of transfer transcripts to assess course equivalents.

## Undergraduate

- Art B.A.
- Art B.A. (Online Delivery)
- Art B.F.A
- Media Arts B.A.
- Media Arts B.F.A
- Media Arts B.F.A - Game Design and Interactive Media Concentration

## Undergraduate Minors

- Art History and Criticism
- Art Studio
- Media Arts

## Undergraduate Certificates

- Digital Design Certificate
- Documentary Film Certificate
- The New West: Art and the Environment Certificate
- Sonic Arts Certificate



## Art B.A.

### Bachelor of Arts - Art

#### College of the Arts and Media

**Degree Specific Credits:** 57

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Shared Foundation Requirements	18
Intermediate Studio Requirements	15
Intermediate Art History, Theory, and Criticism	6
Upper-Division Studio Requirement	12
Upper-Division Art History Requirement	3
Upper-Division Art Criticism Requirement	3
Art Education Licensure	
Total Hours	57

### Shared Foundation Requirements

**Note:** All courses are required unless waived via departmental advanced placement policy.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
<b>Complete one of the following courses:</b>		
ARTZ 108A	Visual Language - 3-D Fndtns	3
or MART 120	Creative Coding I	
Total Hours		18

Minimum Required Grade: C

## Intermediate Studio Requirements

### Notes:

- 9 credits must be taken from the ARTZ and GDSN prefixes at the 200-level.
- The remaining 6 credits may be taken from the ARTZ and GDSN prefixes at the 200-level, and from MART at the 200- or 300-level.
- If ARTZ 108A (Visual Language: 3D Design) is not taken as part of the Shared Foundation Requirements, then the student must take three credits of a 3D studio course at the Intermediate Level.
- These courses fulfill the requirements of Thematic Area groups of Time, Digital, and Material.

CODE	TITLE	HOURS
<b>Complete 15 credits in the following areas:</b>		15
Art (ARTZ) at the 200-level		
Graphic Design (GDSN) at the 200-level		
Media Arts (MAR or MART) at the 200- or 300-level		
Total Hours		15

Minimum Required Grade: C

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## Intermediate History, Theory, and Criticism

**Note:** These courses fulfill the requirements of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 201H	Art of World Civilization II	3
ARTH 250L	Introduction to Art Criticism	3
Total Hours		6

Minimum Required Grade: C

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## Upper-Division Studio Requirements

**Note:**

- 9 credits must be from the ARTZ or GDSN prefixes.
- The remaining 6 credits may be from the ARTZ, GDSN, or MART prefixes.
- These courses should be chosen in consultation with your advisor.

CODE	TITLE	HOURS
<b>Complete 12 credits from the following areas at the 300- or 400-levels:</b>		12
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		12

Minimum Required Grade: C

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## Upper-Division Art History Requirement

**Notes:**

- These courses should be chosen in consultation with your advisor.

## University Of Montana

- This course fulfills the requirement of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete 3 credits in Art History (ARTH) at the 300- and 400-level.</b>		3
Total Hours		3

Minimum Required Grade: C

## Upper-Division Art Criticism Requirement

**Note:** This course fulfills the requirement of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ARTH 350	Contemp Art and Art Criticism	3
Total Hours		3

Minimum Required Grade: C

## Art Education Licensure Requirements

Art Education licensure is earned by taking classes in both the School of Visual and Media Arts and the Phyllis J. Washington College of Education. Students complete their BA or BFA in Art in conjunction with courses required from the College of Education.

Montana Teaching Certification in Art K-12 requires a BA or BFA in Art with a specialization in Art Education, which extends beyond the 120-credit limit, or an MA in Curriculum and Instruction with the required undergraduate credits for teacher certification in art. Students earning a BA or a BFA in Art must also take ARTZ 302A, ARTZ 403 as well as THTR 239A or DANC 497. In addition, students are required to take 35 credits of EDU classes and a Native American Studies Course.

## Teaching Art Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program

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### ○ Licensure Degree Requirements

- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Art Track Requirements

**Note:** ARTZ 302A must be taken prior to ARTZ 403.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 302A	Foundations of Art Education	3
ARTZ 403	Teaching Art II-- K-12	3
DANC 497	Methods: Teaching Movement in Schools	2
or THTR 239A	Creative Drama/Dance: K-8	
Total Hours		8

Minimum Required Grade: C

### Secondary Teaching Licensure

**Note:** For endorsement to teach Art, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Art B.A. (Online Delivery)

### Bachelor of Arts - Art

#### College of the Arts and Media

**Degree Specific Credits: 57**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

**Note:** The completion of these requirements results in the same degree found here: a Bachelor of Arts with a major in Art. However, the requirements are modified to fit the online delivery method. Please see an advisor School of Visual and Media Arts for more information.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Shared Foundation Requirements	18
Intermediate Studio Requirements	15
Intermediate Art History, Theory, and Criticism	6
Upper-Division Studio Requirement	12
Upper-Division Art History, Theory, and Criticism Requirement	3
Upper-Division Capstone	3
Art Education Licensure	
Total Hours	57

### Shared Foundation Requirements

**Note:** All courses are required unless waived via departmental advanced placement policy.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
<b>Complete one of the following courses:</b>		
ARTZ 108A	Visual Language - 3-D Fndtns	3
or MART 120	Creative Coding I	
Total Hours		18

Minimum Required Grade: C

## Intermediate Studio Requirements

### Notes:

- 9 credits must be taken from the ARTZ and GDSN prefixes at the 200-level.
- The remaining 6 credits may be taken from the ARTZ and GDSN prefixes at the 200-level, and from MART at the 200- or 300-level.
- These courses fulfill the requirements of Thematic Area groups of Time, Digital, and Material.
- These courses should be chosen in consultation with your advisor.

CODE	TITLE	HOURS
<b>Complete 15 credits in the following areas:</b>		15
Art (ARTZ) at the 200-level		
Graphic Design (GDSN) at the 200-level		
Media Arts (MAR or MART) at the 200- or 300-level		
Total Hours		15

Minimum Required Grade: C

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## Intermediate Art History, Theory, and Criticism

**Note:** This course fulfills the requirements of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete two 200-level Art History (ARTH) courses or one 200-level Art History (ARTH) course and MART 450</b>		6
Total Hours		6

Minimum Required Grade: C

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## Upper-Division Studio Requirements

**Note:**

- 6 credits must be from the ARTZ or GDSN prefixes.
- The remaining 6 credits may be from the ARTZ, GDSN, or MART prefixes.
- These courses should be chosen in consultation with your advisor.

CODE	TITLE	HOURS
<b>Complete 12 credits at the 300- and 400-levels from the following areas:</b>		12
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		12

Minimum Required Grade: C

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## Upper-Division Art History, Theory, and Criticism Requirement

**Notes:**

- These courses should be chosen in consultation with your advisor.
- This course fulfills the requirement of Thematic Area group of History and Theory.



CODE	TITLE	HOURS
<b>Complete one of the following:</b>		3
Complete 3 credits in Art History (ARTH) at the 300- and 400-level.		
OR		
MART 450	Topics in Film/Media Studies	
Total Hours		3

Minimum Required Grade: C

### Upper-Division Capstone

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ARTZ 495	Senior Studio Project	3
Total Hours		3

Minimum Required Grade: C

### Art Education Licensure Requirements

Art Education licensure is earned by taking classes in both the School of Visual and Media Arts and the Phyllis J. Washington College of Education. Students complete their BA or BFA in Art in conjunction with courses required from the College of Education.

Montana Teaching Certification in Art K-12 requires a BA or BFA in Art with a specialization in Art Education, which extends beyond the 120-credit limit, or an MA in Curriculum and Instruction with the required undergraduate credits for teacher certification in art. Students earning a BA or a BFA in Art must also take ARTZ 302A, ARTZ 403 as well as THTR 239A or DANC 497. In addition, students are required to take 35 credits of EDU classes and a Native American Studies Course.

### Teaching Art Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.

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- Secondary Education Licensure Program
- Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Art Track Requirements

**Note:** ARTZ 302A must be taken prior to ARTZ 403.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 302A	Foundations of Art Education	3
ARTZ 403	Teaching Art II-- K-12	3
DANC 497	Methods: Teaching Movement in Schools	2
or THTR 239A	Creative Drama/Dance: K-8	
Total Hours		8

Minimum Required Grade: C

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## Secondary Teaching Licensure

**Note:** For endorsement to teach Art, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Art B.F.A.

### Bachelor of Fine Arts - Art

#### College of the Arts and Media

**Degree Specific Credits:** 75

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

#### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

#### Summary

Shared Foundation Requirements	18
Intermediate Studio Requirements	15
Intermediate History, Theory, and Criticism	6
Upper-Division Studio Courses Outside of Area of Concentration	12
Upper-Division Studio Courses in Area of Concentration	12
Upper-Division Art History Requirement	3
Upper-Division Art Criticism Requirement	3
Senior Thesis Capstone	6
Art Education Licensure Track Requirements	
Total Hours	75

#### Shared Foundation Requirements

**Note:** All courses are required unless waived via departmental advanced placement policy.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
ARTZ 108A	Visual Language - 3-D Fndtns	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
Total Hours		18

Minimum Required Grade: C

## Intermediate Studio Requirements

### Notes:

- 9 credits must be taken from the ARTZ and GDSN prefixes at the 200-level.
- The remaining 6 credits may be taken from the ARTZ and GDSN prefixes at the 200-level, and from MART at the 200- or 300-level.
- These courses fulfill the requirements of Thematic Area groups of Time, Digital, and Material.
- Courses selected must include 3 credits of both 2D and 3D studio courses.

CODE	TITLE	HOURS
<b>Complete 15 credits of courses in the following areas:</b>		15
Art (ARTZ) at the 200-level		
Graphic Design (GDSN) at the 200-level		
Media Arts (MAR or MART) at the 200- or 300-level		
Total Hours		15

Minimum Required Grade: C

## Intermediate Art History, Theory, and Criticism

**Note:** These courses fulfill requirements of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 201H	Art of World Civilization II	3
ARTH 250L	Introduction to Art Criticism	3
Total Hours		6

Minimum Required Grade: C

## Upper-Division Studio Courses Outside of Area of Concentration

**Note:**

- 9 credits must be from the ARTZ or GDSN prefixes at the 300- and 400- level.
- The remaining 3 credits may be from the ARTZ, GDSN, or MART prefixes at the 300- and 400- level.
- These courses should be chosen in consultation with your advisor.

CODE	TITLE	HOURS
<b>Complete 12 credits at the 300- and 400-levels from the following areas:</b>		12
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		12

Minimum Required Grade: C

## Upper-Division Studio Courses in Area of Concentration

**Note:**

- These courses should be in the same discipline to demonstrate an Area of Concentration. Consult with your advisor before selecting courses.
- A list of all ARTZ courses can be found [here](#).

CODE	TITLE	HOURS
<b>Complete 12 credits of the courses in Art (ARTZ) at the 300- or 400-level.</b>		12
Total Hours		12

Minimum Required Grade: C

## Upper-Division Art History Requirement

**Notes:**

- These courses should be chosen in consultation with your advisor.
- This course fulfills the requirement of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete 3 credits in Art History (ARTH) at the 300- and 400-level.</b>		3
Total Hours		3

Minimum Required Grade: C

## Upper-Division Art Criticism Requirement

**Note:** This course fulfills the requirement of Thematic Area group of History and Theory.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ARTH 350	Contemp Art and Art Criticism	3
Total Hours		3

Minimum Required Grade: C

## Senior Thesis Capstone

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 494	Seminar- Professional Practices	3
ARTZ 499	Senior Thesis/Capstone	3
Total Hours		6

Minimum Required Grade: C

## Art Education Licensure Requirements

Art Education licensure is earned by taking classes in both the School of Visual and Media Arts and the Phyllis J. Washington College of Education. Students complete their BA or BFA in Art in conjunction with courses required from the College of Education.

Montana Teaching Certification in Art K-12 requires a BA or BFA in Art with a specialization in Art Education, which extends beyond the 120-credit limit, or an MA in Curriculum and Instruction with the required undergraduate credits for teacher certification in art. Students earning a BA or a BFA in Art must also take ARTZ 302A, ARTZ 403 as well as THTR 239A or DANC 497. In addition, students are required to take 35 credits of EDU classes and a Native American Studies Course.

## Teaching Art Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Art Track Requirements

**Note:** ARTZ 302A must be taken prior to ARTZ 403.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 302A	Foundations of Art Education	3
ARTZ 403	Teaching Art II-- K-12	3
DANC 497	Methods: Teaching Movement in Schools	2
or THTR 239A	Creative Drama/Dance: K-8	
Total Hours		8

Minimum Required Grade: C

## Secondary Teaching Licensure

**Note:** For endorsement to teach Art, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.



# Art History and Criticism Minor

## Minor - Art History/Criticism

College of the Arts and Media

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** This is a minor in Art History for those not majoring in Art.

### Summary

Studio Art Fundamentals	15
Visual Language	
Beginning Art History	
Beginning Art Criticism	
Upper-Division Art History and Criticism	9
Total Hours	24

### Studio Art Fundamentals

**Rule:** Complete the following subcategories. 15 total credits required.

#### Visual Language

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 105A	Visual Language - Drawing	3
ARTZ 108A	Visual Language - 3D Design	3
Total Hours		6

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Minimum Required Grade: C

### Beginning Art History

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTH 201H	Art of World Civilization II	3
Total Hours		6

Minimum Required Grade: C

### Beginning Art Criticism

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ARTH 250L	Introduction to Art Criticism	3
Total Hours		3

Minimum Required Grade: C

## Upper-Division Art History and Criticism

University Of Montana

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
ARTH 333H	Architectural History I	
ARTH 350	Contemp Art and Art Criticism	
ARTH 391	Special Topics	
ARTH 407	Roman and Early Christian Art	
ARTH 425	Art of the Renaissance	
ARTH 433	Ancient American Art	
ARTH 434	Latin American Art	
ARTH 436	The History of Women in Art	
ARTH 440	20th Century Art	
ARTH 450	Renaissance Theory & Criticism	
ARTH 458	Adv Research in Art History	
ARTH 459	Advanced Research Art Crit	
ARTH 464	African Art	
ARTH 465	Spanish Art	
ARTH 491	Special Topics	
ARTH 494	Sem Art Hist & Crit	
ARTH 498	Internship	
Total Hours		9

Minimum Required Grade: C

# Art Studio Minor

## Minor - Art Studio

College of the Arts and Media

**Degree Specific Credits:** 27

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Summary

Studio Art Fundamentals	24
Visual Language	
Beginning Art History	
Studio I Courses	
Upper-Division Studio Course	3
Total Hours	27

### Studio Art Fundamentals

**Rule:** Complete the following subcategories. 24 total credits required.

#### Visual Language

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
ARTZ 108A	Visual Language - 3-D Fndtns	3
Total Hours		9

# University Of Montana

Minimum Required Grade: C

## Beginning Art History

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTH 201H	Art of World Civilization II	3
Total Hours		6

Minimum Required Grade: C+

## Studio I Courses

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ARTZ 211A	Drawing I	
ARTZ 221A	Painting I	
ARTZ 231A	Ceramics I	
ARTZ 251A	Sculpture I	
ARTZ 271A	Printmaking I	
ARTZ 284A	Photo I-Techs and Processes	
Total Hours		9

Minimum Required Grade: C

## Upper-Division Studio Course

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ARTZ 311	Drawing II	
ARTZ 321	Painting II	
ARTZ 331	Ceramics II	
ARTZ 335	Clay and Glaze	
ARTZ 351	Sculpture II	
ARTZ 371	Printmaking II	
ARTZ 385	The Art of Digital Photography	
ARTZ 388	Alternative Process Photog	
ARTZ 391	Special Topics	
ARTZ 398	Internship	
ARTZ 430	Advanced Research- Ceramics	
ARTZ 451	Advanced Research- Sculpture	
ARTZ 470	Advanced Research- Printmaking	
ARTZ 486	Advanced Research- Photography	
ARTZ 492	Independent Study	
ARTZ 498	Internship	
Total Hours		<b>3</b>

Minimum Required Grade: C

## Art M.A.

There are two areas of specialization for the M.A. in Art:

### Master of Art (M.A.) in Art History

The MA in Art History focuses on research in the historical and cultural context of visual art. It prepares students for advanced graduate work at the Ph.D. level, and careers in art-related professions in museums, galleries, arts organizations and conservation departments.

### Master of Art (M.A.) in Studio Art

This degree requires fewer credits than an M.F.A while still providing a graduate experience. While not designed for those wishing to pursue a professorship after school, it includes many of the crucial features of our graduate program.

## Master of Art - Art

### College of the Arts and Media

**Degree Specific Credits:** 30

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Degree Requirements - Art History

#### **15 CREDITS: ART HISTORY AND CRITICISM (400-level or higher)**

ARTH 400X or 500X Art History ( <i>research paper included</i> )	3
ARTH 503 Critical Theories in Visual Art I	3
ARTH 509 Critical Theories in Visual Art II	3

#### **16 CREDITS: ALLIED FIELDS & STUDIO ART (400-LEVEL OR HIGHER)**

500X or higher (Allied Field)	3
500X or higher (Studio)	3

## **PEDAGOGY & PRE-CANDIDACY**

ARTZ 504 Pre Candidacy	1
ARTZ 506 Pedagogy	3

## **THESIS WRITING & METHODOLOGIES**

ARTH 699 Thesis Writing	3
ARTH 698 Methodologies in Art History	3
Comprehensive Exam	1

## **Degree Requirements - Studio Art**

### **9 CREDITS: 6 CREDITS IN ART HISTORY AND THREE CREDITS IN CRITICAL THEORY**

Graduate Level Art History	3
400 or Graduate Level Art History	3
ARTH 350 Art Criticism	3

### **12 CREDITS INDEPENDENT STUDIO RESEARCH**

Independent Graduate Research	Variable
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### **12 CREDITS: PEDAGOGY, PROFESSIONAL, OPEN ELECTIVES AND THESIS CREDITS**

ARTZ 504 Pre Candidacy	1
400 Level Open Elective	3
ARTZ 699 Thesis Exhibition	2
ARTZ 697 Thesis Paper	1



## Art M.F.A.

At the core of our MFA program is a close one-on-one mentorship with professors, and regular critiques with fellow students. Students investigate ideas and process deeply, and develop their understanding through studio work, research, writing, presentation and critical analysis. Classes include:

- individual credits with professors,
- theory and criticism,
- professional development and college teaching
- critique colloquia, and thematic studio explorations.

## Master of Fine Arts - Art

### College of the Arts and Media

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## Degree Requirements

### **9 CREDITS: ART HISTORY AND CRITICAL THEORY**

ARTH 503 Critical Theories in Visual Art I	3
400 or 500 UG Level Art History	3
ARTH 509 Critical Theories in Visual Art II	3

### **24-29 CREDITS INDEPENDENT STUDIO RESEARCH**

<b>ARTZ 505 - Independent Graduate Research</b>	Variable
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### **10-12 CREDITS: GRADUATE CRITIQUE SEMINARS**

<b>ARTZ 501 Graduate Critique Seminar</b>	2
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**12-15 CREDITS: PEDAGOGY, PROFESSIONAL, OPEN ELECTIVE, EXPANDED STUDIO AND THESIS CREDITS**

<b>ARTZ 506 Pedagogy</b>	3
<b>ARTZ 504 Pre-Candidacy</b>	1
<b>ARTZ 507 Beyond Art School</b>	2
<b>400-500 Level Open Elective</b> ( <i>must be at least a UG 400 level course. Additional courses 500-level only</i> )	3-6
<b>ARTZ 697 Thesis Paper</b>	1
<b>ARTZ 699 Thesis Exhibition</b>	2

- Credits on the 400 level must have the UG designation, and are limited to six (6) credits at the 400-level.

## Media Arts B.A.

The School of Visual and Media Arts continues to lead the way in creating innovative educational experiences for students by offering the most comprehensive fully online Bachelor of Arts degree at the University of Montana. This degree enables students to maximize their creative potential through the study and artistic application of emerging digital technologies. It provides learning opportunities in interactive media, web and internet technologies, film editing, gaming, and a variety of digital design applications including sound, still image, motion, and animation. For more information on requirements, please see the B.A. program heading under academics or the Media Arts website.

### Bachelor of Arts - Media Arts

#### College of the Arts and Media

**Degree Specific Credits:** 57

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Shared Foundation Requirements	18
Lower-Division Core	12
School of Visual and Media Arts Electives	9
Upper-Division Core	18
Total Hours	57

### Shared Foundation Requirements

**Note:** All courses are required unless waived via departmental advanced placement policy.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
ARTZ 108A	Visual Language - 3-D Fndtns	3
or MART 120	Creative Coding I	
Total Hours		18

Minimum Required Grade: C

## Lower-Division Core

**Note:** Courses could fulfill requirements of Thematic Area groups of Time, Digital, Material, and History and Theory.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MART 201H	Hist Digital Arts & Culture	3
MART 245	Introduction to the Language and Practice of Sonic Art	3
MART 255	Photoshop: Art and Design	3
MART 256	Illustrator: Vector and Layout Design	3
Total Hours		12

Minimum Required Grade: C

## School of Visual and Media Arts Electives

**Notes:**

## University Of Montana

- Courses could fulfill requirements of Thematic Area groups of Time, Digital, Material, and History and Theory.
- These courses should be chosen in consultation with your advisor.

CODE	TITLE	HOURS
<b>Complete 9 credits of courses at the 200-level or above in the following areas:</b>		9
Art History (ARTH)		
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		9

Minimum Required Grade: C

## Upper-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MART 302	Intro to Motion Design	3
MART 340	Princ of Interactive Media	3
MART 341	Intro to Web Design	3
MART 342	Art & Sci of Interactive Games	3
MART 441	Web Technologies	3
MART 450	Topics in Film/Media Studies	3
Total Hours		18

Minimum Required Grade: C

# Media Arts B.F.A

## Bachelor of Fine Arts - Media Arts

### College of the Arts and Media

**Degree Specific Credits:** 75

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Shared Foundation sequence must be completed or be in the process of completion before acceptance into the B.F.A program.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Shared Foundations Requirements	18
General Core Courses	12
Advising Track Options	45
Digital Arts & Technology	
Digital Filmmaking	
Sonic Arts	
Total Hours	75

## Shared Foundation Requirements

**Note:** All courses are required unless waived via the department advanced placement policy.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
<b>Complete one of the following courses:</b>		3
Note: B.F.A. students working towards the Sonic Arts or Digital Arts & Technology tracks are required to complete MART 120.		
ARTZ 108A	Visual Language - 3-D Fndtns	
MART 120	Creative Coding I	
Total Hours		18

Minimum Required Grade: C

## General Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MAR 210	Creation of Media Story	3
MART 245	Introduction to the Language and Practice of Sonic Art	3
MART 450	Topics in Film/Media Studies	3
MART 499	Senior Project	3
Total Hours		12

Minimum Required Grade: C

## Advising Track Options

## University Of Montana

In addition to the above requirements, students must choose between one of three advising tracks, either Digital Arts & Technology, Digital Filmmaking, or Sonic Arts.

**Note:** These are advising tracks only and not official programs as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

### **Digital Arts & Technology Track**

**Note:** The Bachelor of Fine Arts Digital Arts & Technology track curriculum focuses on the artistic and creative application of digital technologies. Lower-division core classes cover the fundamentals of software applications such as the Adobe Creative Cloud Suite and include still image, motion, animation, and sound design components. They also include the fundamentals of creative coding. Upper-division core classes cover the principles and applications of web technologies (including HTML, CSS, and Javascript) and interactivity (including gaming, virtual reality, and installations). Senior-level core classes center on advanced projects and developing a portfolio-centered internet presence.



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MAR 251	Dig Video Prod Tech	3
MART 201H	Hist Digital Arts & Culture	3
MART 220	Creative Coding II	3
MART 255	Photoshop: Art and Design	3
MART 256	Illustrator: Vector and Layout Design	3
MART 302	Intro to Motion Design	3
MART 305	3D Animation I	3
MART 325	Introduciton to Animation	3
MART 340	Princ of Interactive Media	3
MART 341	Intro to Web Design	3
MART 416	Production Studio I	3
MART 440	Tech Interactive Media Design	3
MART 441	Web Technologies	3
MART 445	Sound for Digital Media	3
MART 457	Production Studio II	3
Total Hours		45

Minimum Required Grade: C

### Digital Filmmaking Track

**Note:** The Bachelor of Fine Arts Digital Filmmaking track offers an all-inclusive experience in the areas of pre-production, production, and post-production. Project-based courses cover narrative, experimental, documentary, and commercial content creation for both traditional and interactive-based environments.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MAR 251	Dig Video Prod Tech	3
MAR 252	Screenwriting	3
MAR 442	Experimental Film	3
MART 300	Visions of Film	3
MART 325	Introduciton to Animation	3
MART 327	Intro to Cinematography	3
MART 336	Directing the Fic Film	3
MART 340	Princ of Interactive Media	3
MART 345	Sound for Film	3
MART 436	Producing	3
MART 455	Visions of Documentary Film	3
MART 499	Senior Project (Both Senior Project and a Professional Portfolio are required)	3
<b>Complete 9 elective credits of courses at the 200-level or above in the following areas:</b>		9
Note: These courses should be chosen in consultation with your advisor.		
Art History (ARTH)		
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		45

Minimum Required Grade: C

**Sonic Arts Track**

**Note:** The Sonic Arts track curriculum offers an in-depth experience in the design, development, and production of sonic artwork and provides a platform for students to integrate their work within the diverse world of art.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MART 220	Creative Coding II	3
MART 330	Principles of Sound Design	3
MART 340	Princ of Interactive Media	3
MART 345	Sound for Film	3
MART 420	Sonic Programming	3
MART 440	Tech Interactive Media Design	3
MART 445	Sound for Digital Media	3
MUST 110	Digital Audio & Multitracking	2
MUST 210	Sequencng, Synthesis, Sampling	2
MUST 310	Interactivity Digitl Sgnl Proc	2
MUST 410	Computer Music Programming	2
<b>Complete 16 elective credits of courses at the 200-level or above in the following areas:</b>		16
Note: These courses should be chosen in consultation with your advisor.		
Art History (ARTH)		
Art (ARTZ)		
Graphic Design (GDSN)		
Media Arts (MAR or MART)		
Total Hours		45

Minimum Required Grade: C

## Media Arts B.F.A - Game Design and Interactive Media

### Bachelor of Fine Arts - Media Arts; Game Design and Interactive Media Concentration

#### College of Arts and Media

**Degree Specific Credits:**

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Shared Foundation sequence must be completed or be in the process of completion before acceptance into the B.F.A program.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

CODE	TITLE	HOURS
Shared Foundations Requirements		18
General Core Courses		12
Game Design and Interactive Media Concentration		45
Total Hours		75

### Shared Foundation Requirements

**Note:** All courses are required unless waived via the department advanced placement policy.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 150H	Introduction to Art History	3
ARTZ 105A	Visual Language - Drawing	3
GDSN 149A	Digital Imaging I	3
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
MART 120	Creative Coding I	3
Total Hours		18

Minimum Required Grade: C

## General Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MAR 210	Creation of Media Story	3
MART 245	Principles of Sound Design	3
MART 450	Topics in Film/Media Studies	3
MART 499	Senior Project	3
Total Hours		12

Minimum Required Grade: C

## Game Design and Interactive Media Concentration

**Note:** The Game Design and Interactive Media (GDIM) curriculum provides a grounding in the design, storytelling, illustration and 3D animation as paired with creative coding and in-depth game development coursework. Students learn to conceptualize, iterate and produce games that fit their artistic visions as well as their career goals. GDIM is preparation for the professional fields of Mobile App design, Game development, and Interactive Art and Media.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 214	Illustration	3
MART 220	Creative Coding II	3
MART 252	Screenwriting	3
MART 302	Introduction to Motion Design	3
MART 305	3D Animation	3
MART 341	Introduction to Web Design	3
MART 342	Art & Sci Interactive Games	3
MART 360	History, Ethics, and Theory of Games	3
MART 361	Serious Games	3
MART 340	Principles of Interactive Media	3
MART 441	Web Tech (Web Gaming)	3
MART 460	Game Engines	3
MART 461	Web Server Tech	3
MART 462	Mobile Game Development	3
MART 499	Senior Project	3
Total Hourse		45

Minimum Required Grade: C

## Digital Design Certificate

The Digital Design Certificate provides students the opportunity to establish a base understanding of the tools and techniques of computer-based digital imaging, design and publication. Ranging from photo editing/manipulation, graphical elements (raster and vector) to typography, layout design, and basic animation.

### Post-secondary Certificate - Digital Design

#### College of Arts and Media

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Digital Design Certificate Required Courses		12
Total Hours		12

#### Digital Design Certificate Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GDSN 149A	Digital Imaging I	3
GDSN 231	Graphic Design Applications	3
MART 255	Photoshop Art & Design	3
MART 256	Illustrator: Vector Design & Layout	3
Total Hours		12

Minimum Required Grade: C-

## Documentary Film Certificate

The certificate in documentary film provides students with the practical skills and theoretical knowledge needed to successfully communicate concepts and narratives via the modes of non-fiction filmmaking. Students will acquire a foundational knowledge of essential techniques in cinematography, editing, and sound mixing, and apply them in both journalistic and artistic ways.

The skills and knowledge gained through the completion of this certificate are applicable to many fields, and are complimentary to the work of any student seeking to communicate non-fiction narratives through visual means.

## Post-secondary Certificate - Documentary Film

### College of the Arts and Media

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	15
Total Hours	15

### Required Courses



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JRNL 257A or MART 251	Beginning Visual Journalism or Digital Video Production	3
JRNL 350	Intermediate Video Photography	3
JRNL 488 or MART 455	Student Documentary Unit or Visions of Documentary Film	3
JRNL 491	Documentary Film History	3
MART 345	Sound for Film	3
Total Hours		15

Minimum Required Grade: C-

# The New West: Art and the Environment Certificate

## Post-Secondary Certificate - The New West: Art and the Environment Certificate

### College of the Arts and Media

Art provides a critical lens to explore the history, use, and contemporary stewardship of western American lands. Working independently and collaboratively in hands-on research, students will study in the field, studio, seminar, and lecture. This certificate is appropriate for students from a wide range of disciplines. Students learn visual expression skills for innovative interpretations and positive solutions.

Students are admitted to the New West Certificate by completion of application. The application is posted on line through the School of Visual and Media Arts website.

**Degree Specific Credits: 12**

**Required Cumulative GPA: 2.00**

**Catalog Year: 2021-22**

### Summary

Required Courses	12
Total Credits	12

### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete 12 credits of the following courses:</b>		
ARTH 444	Open Range: Land Art and the American Consciousness	
ARTZ 394	Seminar- Environmental Drawing	
ARTZ 410	Advanced Research - Drawing	
ARTZ 420	Advanced Research - Painting	
ARTZ 451	Advanced Research - Sculpture	
CRWR 424	Creative Writing: Nonfiction, New West: From This Point	
FILM 481	Advanced Studies in Film	
Total Credits:		12

Minimum Required Grade: C-

## Sonic Arts Certificate

The Sonic Arts certificate offers students an opportunity to develop skills, technique, and theory in audio and sound. The directed sequence of courses assumes students are coming in with no formal training in sound or audio and allows them to acquire knowledge around the science of sound, the practical applications of working with sound, capturing and manipulating sound for artistic purposes, and basic studio techniques.

### Post-secondary Certificate - Sonic Arts

#### College of the Arts and Media

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Sonic Arts Certificate Required Courses		12
Total Hours		12

#### Sonic Arts Certificate Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MART 245	Introduction to the Language and Practice of Sonic Art	3
MART 330	Principles of Sound Design	3
MART 345	Sound for Film	3
MART 445	Sound for Digital Media	3
Total Hours		12

Minimum Required Grade: C-

## Media Arts Minor

The Media Arts minor program offers an integrated curriculum, centered in digital technology as a storytelling medium. The minor is meant to supplement the work of those undergraduate students whose major area of study can be enhanced through the application of Media Arts principles and technologies and fulfills the prerequisites for those interested in pursuing the B.A. The Media Arts minor is offered both in-class and online. For more information please visit the Media Arts website.

### Minor - Media Arts

#### College of the Arts and Media

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	12
Elective Courses	9
Total Hours	21

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MART 101L	Intro to Media Arts	3
MART 112A	Introduction to Film Editing	3
MART 102	Digital Technology in the Arts	3
MART 111A	Intro to Photoshop	3
Total Hours		12

Minimum Required Grade: C

## Elective Courses

**Rule:** Each student must complete 9 additional credits outside of their major that support their work and development in Media Arts. All elective courses need to be approved by the Director of the School of Media Arts.

**Note:** Students may select from any of the elective Media Arts courses (MAR) offered. These include the online and special topics courses that are offered periodically. In addition, there are a variety of courses offered throughout the College of Visual and Performing Arts. For more information please see the Media Arts Director.

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
ARTH 200H	Art of World Civilization I	
ARTH 201H	Art of World Civilization II	
ARTZ 105A	Visual Language - Drawing	
ARTZ 106A	Visual Language - 2-D Fndtns	
DANC 100A	Introduction to Modern Dance	
DANC 115A	Introduction to Jazz Dance	
MART 304	Modern Horror Film	
MART 191	Special Topics	
MART 255	Photoshop: Art and Design	
MART 256	Illustrator: Vector and Layout Design	
MART 341	Intro to Web Design	
MART 342	Art & Sci of Interactive Games	
MUSE 123	Techniques: Voice	
MUSI 101L	Enjoyment of Music	
MUSI 108A	Orchestra: UMSO	
MUSI 112A	Choir	

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MUSI 114A	Band: UM Concert Band	
MUSI 131A	Jazz Ensemble I: UM Jazz Bands	
MUSI 132L	History of Rock & Roll	
MUSI 133L	Cntry Msc:Cowbys,Opry,Nshville	
MUSI 202L	Intro to Music Literature	
MUSI 207H	World Music (equiv to 307)	
MUSI 416	Topics in Music History	
MUST 110	Digital Audio & Multitracking	
THTR 102A	Introduction to Theatre Design	
THTR 120A	Introduction to Acting I	
THTR 121	Introduction to Acting II	
THTR 336	Costume History	
Total Hours		9

Minimum Required Grade: C

## College of Business

**Suzanne Tilleman, Interim Dean**

**Klaus Uhlenbruck, Associate Dean**

The College of Business, founded in 1918, is the largest professional school at the University. All programs are accredited by AACSB International The Association to Advance Collegiate Schools of Business, and accounting programs also hold separate AACSB accreditation.

### Mission

The College of Business at the University of Montana creates transformative, integrated, and student-centric learning experiences, propelling our students to make immediate and sustained impacts on business and society. We nurture our students innate work ethic to develop confident problem solvers and ethical decision makers. We pursue thought leadership and collectively create opportunities for a better life for our students, faculty, and staff.

The goal of the College of Business's programs is to provide a broad foundation in business practice and theory, supplemented by deep expertise within one or more specific business disciplines through majors and certificates. The complexity of contemporary society has increased the need for responsible, ethical leadership in organizations with local and global reach. A professional business education combined with solid grounding in the liberal arts and sciences prepares men and women to meet difficult challenges and to contribute to society in meaningful ways. College of Business graduates work in business, nonprofit, and government sectors all over the world.

Students may pursue programs of study leading to the B.S. in Business Administration with a major in any of the following areas:

- accounting,
- finance,
- international business,
- management & entrepreneurship,
- management information systems, and
- marketing.

Students pursuing other undergraduate degrees can complete a minor in Business Administration or various certificates.

### High School Preparation

High school students who are planning to major or minor in business administration at the University of Montana-Missoula should take their school's college preparatory curriculum. Additional courses to improve quantitative, writing, verbal communication, analytical, and computer skills will be beneficial. Students should take as much mathematics as possible, including two years of algebra.



## Credit/No Credit Option

Most business administration courses are offered for traditional letter grade only.

All courses required for the major, the minor, certificates, and all general education courses must be taken for a traditional letter grade. Business courses taken as electives may be taken on a credit/no credit basis only if not identified as traditional letter grade in the registration system and if approved by the instructor and the department chair. For additional information see the Academic Policies and Procedures section of the catalog.

## Graduate Programs

Opportunity for further study at the graduate level is offered through programs leading to the degrees of

- Master of Accountancy (M-Acct.),
- Master of Business Administration (M.B.A.),
- Master of Science in Business Analytics (M.S.-B.A.)
- Joint J.D./M.B.A.,
- Joint M.B.A./D.P.T. and
- Joint M.B.A./Pharm.D.

The M.B.A. M.S. - B.A. and M-Acct. programs are suited to all students regardless of undergraduate training. Students in the arts and sciences or other professional schools are encouraged to consider these graduate business programs. Further details may be obtained from the Graduate School or by specific inquiries directed to: Director of M.B.A. Program, College of Business, Director of M.S.-B. A. Program College of Business or Director of M-Acct. Program, College of Business.

## Accounting and Finance Department

**Tony Crawford, Ph.D, CPA, Chair**

The Department of Accounting and Finance prepares ethically aware decision-makers with effective analytical and qualitative business knowledge and skills to become professionals in their respective fields in the region and beyond. We commit to high quality teaching and applying scholarship to professional practice, pedagogy, and theory to enhance the professional accounting and finance fields. The department offers the Master of Accountancy degree and two undergraduate majors within the Bachelor of Science in Business Administration degree: Accounting and Finance. The department also offers a Certificate in Accounting Information Systems.

### Undergraduate Baccalaureate Programs

- Bachelor of Science in Business Administration - Accounting
- Bachelor of Science in Business Administration - Finance

### Undergraduate Certificate Programs

- Accounting Information Systems

## Accounting B.S.

The undergraduate accounting program is committed to preparing students to apply accounting and business knowledge in organizations. Students develop competence in a broad range of accounting practices. The curriculum strives to foster critical thinking and problem-solving skills. Students are prepared to enter professional positions in accounting with business, nonprofit, or government organizations. Accounting programs in the College of Business hold separate AACSB International accreditation.

See the College of Business section of the catalog for additional credit restrictions and residency requirements.

## Bachelor of Science - Accounting

### College of Business

**Degree Specific Credits:** 75-77

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Note:

- At least 54 credits must be earned in Business classes (ECNS, COB internship courses and COB faculty-led study abroad courses maybe counted as Business classes). A minimum GPA of 2.0 is required for these courses.
- No more than 30 credits of ACTG (including ACTG 201 and ACTG 202) may count towards the 120 credits required to graduate.
- At least 27 credits in business, the capstone courses, AND all required 400-level accounting courses must be taken at UM.
- All Business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone and Upper-Division Writing Requirement	
Accounting Major Requirements	20
Accounting Major Electives	4
Total Hours	75-77

### College of Business Requirements

#### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

# University Of Montana

Minimum Required Grade: C-

## Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

## Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

## Secondary Lower Core Courses

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

**Capstone and Upper-Division Writing Requirement**

**Notes:**

## University Of Montana

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

## Accounting Major Requirements

### Notes:

- No more than 30 credits of ACTG (including ACTG 201 and ACTG 202) may count towards the 120 credits required to graduate.
- All required 400-level accounting courses must be taken at UM.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 305	Corporate Reporting I (Grade of C is required)	3
ACTG 306	Corporate Reporting II	3
ACTG 321	Acct Information Systems I	3
ACTG 401	Federal Income Taxation	3
ACTG 410	Cost/Mgmt Acct I	3
ACTG 411	Auditing I	3
ACTG 425	State and Local Government Accounting	2
Total Hours		20

Minimum Required Grade: C-

## Accounting Major Electives

**Notes:**

- No more than 4 credits of ACTG 498 may count towards the 120 credits required to graduate.
- No more than 30 credits of ACTG (including ACTG 201 and ACTG 202) may count towards the 120 credits required to graduate.
- See MAcct Director for information pertaining to the Master's of Accountancy Program or taking the CPA exam.

CODE	TITLE	HOURS
<b>Complete four credits from the following courses:</b>		4
ACTG 307	Corporate Reporting III	
ACTG 420	Cost/Mgmt Acct II	
ACTG 426	Acctg for Nonprofits	
ACTG 432	Income Tax Practicum	
ACTG 498	Internship	
Total Hours		4

Minimum Required Grade: C-



## Finance B.S.

The finance curriculum is designed to equip students with a comprehensive foundation in financial management, financial markets and investments. Students will gain competence in making effective decisions, performing complex analyses, providing expert financial advice and utilizing current technology tools and data sources.

### Basic Requirements for Finance Major

All students must complete a faculty-approved plan of study during the first semester of their junior year. The plan of study is available from a finance faculty advisor and must be completed and signed by the faculty advisor. Failure to implement and adhere to a program of study may delay graduation. Some courses have grade requirements in the prerequisite course (see the catalog course descriptions). Many of these courses may be taught once a year, so students should see their advisor for the schedule each academic year.

## Bachelor of Science - Finance

### College of Business

**Degree Specific Credits:** 75-77

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Notes:

- At least 54 credits must be earned in Business classes (ECNS, COB internship and COB faculty let study abroad courses may be counted in Business classes). A minimum GPA of 2.0 is required for these courses.
- At least 27 credits in business, the capstone course, AND all required 400-level finance courses must be taken at UM.
- All business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

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## Summary

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone and Upper-Division Writing Requirement	
Finance Major Requirements	15
Finance Major Electives	9
Total Hours	75-77

## College of Business Requirements

### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

## University Of Montana

Minimum Required Grade: C-

### Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

### Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

### Secondary Lower Core Courses

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

**Capstone and Upper-Division Writing Requirement**

**Notes:**

## University Of Montana

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

## Finance Major Requirements

**Note:** Finance major courses only offered once per academic year. All required 400-level finance courses must be taken at UM.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 420	Investments	3
BFIN 424	Markets, Instns & Fin Enginrng	3
BFIN 429	Fin Mgmt I:Thry/Analysis	3
BFIN 439	Fin Mgmt II: Analysis/Problems	3
BFIN 450	Banking	3
Total Hours		15

Minimum Required Grade: C-

## Finance Major Electives

**Note:**

- BFIN 205S is encouraged for Finance majors, but does not count as an elective for the Finance Major.

## University Of Montana

- These 9 credits are selected in consultation with your faculty advisor. A signed track sheet reflecting these courses is required on file in the College of Business Advising Office.
- Up to 3 credits of BFIN 498 can count towards the 9 credit elective requirement.

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
ACTG 305	Corporate Reporting I	
ACTG 321	Acct Information Systems I	
ACTG 410	Cost/Mgmt Acct I	
BFIN 301	Analysis of Finan Statements	
BFIN 410	\$50,000 Portfolio	
BFIN 421	Real Estate Invtmnt & Analysis	
BFIN 473	Multinational Financial Mgmt	
BFIN 498	Internship	
BMIS 326	Introduction to Data Analytics	
BMIS 479	Introduction to Consulting	
ECNS 301	Intermediate Microeconomics with Calculus	
ECNS 302	Intermediate Macroeconomics	
ECNS 403	Introduction to Econometrics	
Total Hours		9

Minimum Required Grade: C-

# Accounting Information Systems Certificate

## Post-Secondary Certificate - Accounting Information Systems

College of Business

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Notes:**

- All students pursuing an AIS Certificate must also complete the degree requirements for one of the Business majors.
- The 3.0 GPA requirement pertains specifically to the 24 credits listed below, not a student's cumulative GPA.
- Please meet with an AIS Certificate Advisor for assistance (see COB Advising for list of advisors by major).

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## Summary

Accounting Information Systems Certificate Requirements	21
Accounting Information Systems Certificate Electives	3
Total Hours	24

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## Accounting Information Systems Certificate Requirements

**Note:** See individual course descriptions in the catalog for additional grade and prerequisite requirements.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 305	Corporate Reporting I	3
ACTG 306	Corporate Reporting II	3
ACTG 321	Acct Information Systems I	3
ACTG 411	Auditing I	3
BMIS 326	Introduction to Data Analytics	3
BMIS 373	Business System Analy & Design	3
BMIS 479	Introduction to Consulting	3
Total Hours		21

Minimum Required Grade: C-

## Accounting Information Systems Certificate Electives

**Note:** See individual course descriptions in the catalog for additional grade and prerequisite requirements.

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
BMIS 365	Business App Development	
BMIS 370	Managing Information and Data	
Total Hours		3

Minimum Required Grade: C-



# Management Information Systems Department

**Cameron Lawrence, Chair**

The Department of Management Information Systems offers a major in Management Information Systems within the Bachelor of Science in Business Administration.

## Management Information Systems Major

The Management Information Systems STEM curriculum prepares students to manage an organization's information resources. The major focuses on:

1. analyzing and synthesizing information flows within and across the organization's business processes;
2. effectively managing the acquisition, deployment, and utilization of information systems; and
3. using both information and information technology to enhance the organization's strategic advantage.

The knowledge and skills developed in the curriculum lead to careers in data analytics, cybersecurity, consulting, application development, infrastructure management, systems analysis, technology and design, electronic commerce, and project management.

## Certificate in Big Data Analytics

The Big Data Analytics (BDA) certificate is designed to provide students with the tools necessary to compete in the Big Data space. Students will use big data tools that are currently available to capture, analyze, and present big data. They will explore a variety of applications with which Big Data tools can be applied, and they will complete a Big Data project. This certificate is currently aimed at students majoring in business, computer science, or mathematics.

## Undergraduate Baccalaureate Programs

- Management Information Systems B.S.

## Undergraduate Minors

- Business Administration Minor

## Undergraduate Certificate Programs

- Certificate in Big Data Analytics

University Of Montana

# Management Information Systems B.S.

## Bachelor of Science - Management Information Systems

College of Business

**Degree Specific Credits:** 75-77

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Notes:**

- At least 54 credits must be earned in Business classes (ECNS, COB internship courses and College of Business faculty-led study abroad course may be counted as Business classes). A minimum GPA of 2.0 is required for these courses.
- At least 27 credits in business AND BMIS 476 must be taken at UM.
- All business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

# University Of Montana

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone Course and Upper-Division Writing Requirement	
Management Information Systems Requirements	18
Management Information Systems Electives	6
Total Hours	75-77

## College of Business Requirements

### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

# University Of Montana

Minimum Required Grade: C-

## Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

## Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

## Secondary Lower Core Courses

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

**Capstone and Upper-Division Writing Requirement**

**Notes:**

## University Of Montana

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

## Management Information Systems Requirements

### Notes:

- BMIS 365 and BMIS 476 must be taken at UM.
- 3 credits of BMIS 498 are required to graduate.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BMIS 326	Introduction to Data Analytics	3
BMIS 365	Business App Development	3
BMIS 372	Information Infrastructures	3
BMIS 373	Business System Analy & Design	3
BMIS 476	Integrated Project Mgmt for IS	3
BMIS 498	Internship	3
Total Hours		18

Minimum Required Grade: C-

## Management Information Systems Electives

University Of Montana

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		<b>6</b>
ACTG 321	Acct Information Systems I	
BMGT 467	Global Operations and Supply Chain Management	
BMIS 370	Managing Information and Data	
BMIS 391	Special Topics	
BMIS 465	Introduction to Real-time Data Analytics	
BMIS 471	Fund of Network & Security Management	
BMIS 472	Advanced Network & Security Management	
BMIS 478	E Commerce a Managerl Prspctv	
BMIS 479	Introduction to Consulting	
BMIS 491	Special Topics	
BMIS 492	Independent Study	
BMKT 460	Mktg Hi-Tech Prod & Innov	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
CSCI 448	Pattern Recognition	
CSCI 464	Applications of Mining Big Data	
M 461	Data Science Analytics	
STAT 451	Statistical Methods I	
Total Hours		<b>6</b>

Minimum Required Grade: C-

## Big Data Analytics Certificate

The Big Data Analytics (BDA) certificate is designed to provide students with the tools necessary to compete in the Big Data space. Students will use big data tools that are currently available to capture, analyze, and present big data. They will explore a variety of applications with which Big Data tools can be applied, and they will complete a Big Data project. This certificate is currently aimed at students majoring in business, computer science, or mathematics.

### Post-secondary Certificate - Big Data Analytics

#### College of Business

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Notes:**

- All students pursuing a Big Data Analytics Certificate must also complete the degree requirements for a UM major.
- The 3.0 GPA requirement pertains specifically to the 12 credits required for this certificate, not a student's cumulative GPA.
- Please meet with a Big Data Analytics Certificate Advisor for assistance (Computer Science and Mathematics majors contact their department; all others contact COB Advising).
- Complete the Big Data Analytics certificate application (available from the COB advising office).

### Summary

Big Data Analytics Certificate Foundational Course	3
Big Data Analytics Certificate Elective Courses	6
Big Data Analytics Certificate Capstone Course	3
Total Hours	12

### Big Data Analytics Certificate Foundational Course

**Note:** See individual course descriptions in the catalog for additional grade and prerequisite requirements.



CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BMIS 326	Introduction to Data Analytics	3
Total Hours		3

Minimum Required Grade: C-

### Big Data Analytics Certificate Elective Courses

CODE	TITLE	HOURS
<b>Complete six credits from the following courses:</b>		6
BMIS 465	Introduction to Real-time Data Analytics	
BMKT 440	Marketing Analytics	
CSCI 444	Data Visualization	
CSCI 447	Machine Learning	
CSCI 448	Pattern Recognition	
CSCI 464	Applications of Mining Big Data	
CSCI 480	Applied Parallel Computing Techniques	
CSCI 564	Applications of Mining Big Data	
CSCI 580	Applied Parallel Computing Techniques	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
Total Hours		6

Minimum Required Grade: C-

### Big Data Analytics Certificate Capstone Course

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		
BMIS 482	Big Data Project	3
or M 467	Data Science Projects	
Total Hours		3

Minimum Required Grade: C-

# Cybersecurity Management Certificate

The Cybersecurity Management Certificate is designed to provide students with the technical and management skills necessary to work in the Cybersecurity field. Students will use Cybersecurity skills as a consultant or as an employee helping an organization to develop and implement a Cybersecurity program or respond to security incidents. Students will explore a variety of knowledge areas of Cybersecurity Management and apply that knowledge in a project in the capstone course. The curriculum is based on the Core Knowledge Units developed by the National Security Agency (NSA) and the Department of Homeland Security (DHS). Students will gain skills in programming; networking technology & protocols; databases & analytics; probability & statistics; policy, legal, ethics, and compliance; cybersecurity fundamentals & practices, and cybersecurity management & planning.

## Post-secondary Certificate - Cybersecurity Management

### College of Business

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Notes:**

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### Summary

Foundation Course: Network, Protocols, & Sys. Admin. Knowledge Pathway	3
Programming & Scripting Knowledge Pathway	3
Databases, Analytics, & Statistics Knowledge Pathway	3
Policy, Legal, Ethics, & Compliance Knowledge Pathway	3
Cybersecurity Management & Planning Knowledge Pathway	3
Capstone Course: Cybersecurity Fundamentals & Practices Knowledge Pathway	3
Total Hours	18

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### Foundation Course: Network, Protocols, & Sys. Admin. Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
BMIS 471	Fund of Network & Security Management	3
CSCI 466	Networks	
CSCI 476 or CSCI 574	Computer Security	
ITS 214	Network OS - Infrastructure	
Total Hours		3

Minimum Required Grade: C-

### Programming & Scripting Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BMIS 365	Business App Development	
BMIS 465	Introduction to Real-time Data Analytics	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
CSCI 258	Web Application Development	
Total Hours		3

Minimum Required Grade: C-

### Databases, Analytics, & Statistics Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
BMIS 326	Introduction to Data Analytics	
BMIS 370	Managing Information and Data	
CSCI 232	Intermediate Data Structures and Algorithms	
CSCI 340	Database Design	
CSCI 444	Data Visualization	
Total Hours		<b>3</b>

Minimum Required Grade: C-

### Policy, Legal, Ethics, & Compliance Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
ACTG 321	Acct Information Systems I	
BGEN 220E	Business Ethics and Social Responsibility	
BGEN 361	Principles of Business Law	
CSCI 215E	Social & Ethical Issues in Computer Science	
CSCI 315E	Computers, Ethics, and Society	
Total Hours		<b>3</b>

Minimum Required Grade: C-

### Cybersecurity Management & Planning Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BMIS 476	Integrated Project Mgmt for IS	
BMIS 478	E-Commerce: A Managerial Perspective	
BMIS 479	Introduction to Consulting	
BMIS 482	Big Data Project	
CSCI 400	Digital Entrepreneurship	
Total Hours		3

Minimum Required Grade: C-

### Capstone Course: Cybersecurity Fundamentals & Practices Knowledge Pathway

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BMIS 472	Advanced Network & Security Management	3
Total Hours		3

Minimum Required Grade: C-

# Management and Marketing Department

**Justin Angle, Chair**

The Department of Management and Marketing offers three majors within the Bachelor of Science in Business Administration: International Business, Management, and Marketing.

## Undergraduate

- International Business B.S.
- Management and Entrepreneurship B.S.
- Marketing B.S.

## Undergraduate Certificates

- Digital Marketing Certification
- Entertainment Management Certificate
- Entrepreneurship and New Venture Creation Certificate
- Sustainable Business Strategy

# International Business B.S.

## Bachelor of Science - International Business

### College of Business

**Degree Specific Credits:** 73-87

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:**

- At least 54 credits must be earned in Business classes (ECNS, COB internship courses and COB faculty-led study abroad courses may be counted as Business classes). A minimum GPA of 2.0 is required for these courses.
- At least 27 credits in business must be taken at UM.
- All business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.
- In addition to the below requirements, students seeking a major in International Business must complete all degree requirements for a major in ACCT, FIN, MGMT, MIS, or MKTG.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary



## University Of Montana

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone and Upper-Division Writing Requirement	
International Business Major Requirements	12
International Business Language Requirement	4-16
International Business Major Electives	6
Total Hours	73-87

### College of Business Requirements

#### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

Minimum Required Grade: C-

### Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

### Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

**Secondary Lower Core Courses**

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

### Capstone and Upper-Division Writing Requirement

#### Notes:

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

### International Business Major Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 473	Multinational Financial Mgmt	3
BGEN 360	International Business	3
BMGT 467	Global Operations and Supply Chain Management	3
BMGT 480	Cross-Cultural Mgmt	3
Total Hours		12

Minimum Required Grade: C-

### International Business Major Language Requirement

**Note:** A student may be exempt from this requirement if using English as a second language or another language not offered by the University of Montana. Please see the International Business advisor for assistance.

CODE	TITLE	HOURS
<b>Complete the 202 level or equivalent in a modern or classical language.</b>		4-16
Total Hours		4-16

Minimum Required Grade: C-

### International Business Major Electives

**Note:** These 6 credits are selected in consultation with your faculty advisor. A signed track sheet reflecting these courses is required on file in the College of Business Advising Office.

CODE	TITLE	HOURS
<b>Complete 6 credits in courses approved by your advisor.</b>		6
Total Hours		6

Minimum Required Grade: C-

# Management & Entrepreneurship B.S.

## Bachelor of Science - Management & Entrepreneurship

### College of Business

**Degree Specific Credits:** 75-77

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### **Notes:**

- At least 54 credits must be earned in Business classes (ECNS, College of Business internship courses, and College of Business faculty-led study abroad courses may be counted as Business Classes). A minimum GPA of 2.0 is required in these courses.
- At least 27 credits in business courses must be taken at UM.
- All business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone Course and Upper-Division Writing Requirement	
Management Major Requirements	12
Management Major Electives	12
Total Hours	75-77

## College of Business Requirements

### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

## University Of Montana

Minimum Required Grade: C-

### Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

### Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

### Secondary Lower Core Courses

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

**Capstone and Upper-Division Writing Requirement**

**Notes:**

## University Of Montana

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

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## Management Major Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 360	International Business	3
BMGT 420	Leadership and Motivation	3
BMGT 444	Management Communications	3
BMGT 448	Entrepreneurship	3
Total Hours		12

Minimum Required Grade: C-

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## Management Major Electives

### Notes:

- Up to 4 credits of BMGT 458 can count towards the 12 credit elective requirement.
- Up to 6 credits of BMGT 491 can count towards the 12 credit elective requirement.
- Up to 6 credits of BMGT 493 can count towards the 12 credit elective requirement.
- Up to 6 credits of BMGT 494 can count towards the 12 credit elective requirement.

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- Up to 3 credits of BMGT 498 can count towards the 12 credit elective requirement.

CODE	TITLE	HOURS
<b>Complete 12 credits from the following courses:</b>		<b>12</b>
BGEN 445	Sustainability Reporting	
BMGT 326	Human Resource Management	
BMGT 401	Event Management	
BMGT 402	Prin of Entertainment Mgmt I	
BMGT 403	Prin of Entertainment Mgmt II	
BMGT 410	Sustainable Business Practices	
BMGT 458	Advanced Entrepreneurship	
BMGT 467	Global Operations and Supply Chain Management	
BMGT 480	Cross-Cultural Mgmt	
BMGT 491	Special Topics	
BMGT 493	International Experience	
BMGT 494	Seminar/Workshop	
BMGT 498	Internship	
Total Hours		<b>12</b>

Minimum Required Grade: C-

## Marketing B.S.

The marketing major provides students with knowledge and skills required for the process of marketing products, services, or ideas. The contemporary role of marketing in society is treated from various perspectives, including functional and institutional analysis, as well as the application of decision-making tools.

### Bachelor of Science - Marketing

#### College of Business

**Degree Specific Credits:** 75-77

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Notes:

- At least 54 credits must be earned in Business classes (ECNS, College of Business internship course and COB faculty-led study abroad courses may be counted as Business Classes). A minimum GPA of 2.0 is required for these courses.
- At least 27 credits in business must be taken at UM.
- All business credits transferred in after matriculating to UM must be pre-approved by the department chair in your major.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

## University Of Montana

College of Business Requirements	51-53
Primary Lower Core Courses	
Math Requirement	
Statistics Requirement	
Secondary Lower Core Courses	
Upper Major Core Courses	
Capstone Course and Upper-Division Writing Requirement	
Marketing Major Requirements	15
Marketing Major Electives	9
Total Hours	75-77

## College of Business Requirements

### Primary Lower Core Courses

**Note:** Unless a higher requirement is specified, all primary lower core courses must be completed with a C- or better and a 2.0 GPA in the eight (8) listed courses prior to admission into an upper-division Business Major. A minimum grade of C or better is required for ACTG 201 and ACTG 202 as a prerequisite for ACTG 305.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 222	Business Models and Operations	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
Total Hours		18

## University Of Montana

Minimum Required Grade: C-

### Math Requirement

**Note:** The College of Business requires that credit be earned for one of the math courses below (with a C- or better) before enrolling in ACTG 202. A student's result on the ALEKS Math Placement Exam or Maplesoft Math Placement Exam does not waive this math requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
Total Hours		3-4

Minimum Required Grade: C-

### Statistics Requirement

**Note:** This is a primary lower core course. The College of Business requires that credit be earned for STAT 216 (preferred) or one of the other statistics courses below (with a C- or better) prior to being admitted into an upper-division College of Business major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics (preferred)	
Total Hours		3-4

Minimum Required Grade: C-

### Secondary Lower Core Courses

**Note:** All courses must be completed with a "C-" or better to satisfy prerequisites for certain major, upper major core, or capstone courses. Students are advised to complete these courses prior to being admitted to an upper-division Business Major. Prerequisites are strictly enforced.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 220E	Business Ethics and Social Responsibility (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Ethical & Human Values Requirement	3
COMX 111A	Introduction to Public Speaking (Students must complete this course with a C- or better prior to taking the capstone, though earlier completion is strongly encouraged.) Expressive Arts Requirement	3
ECNS 202S	Principles of Macroeconomics Social Science Requirement	3
Total Hours		9

Minimum Required Grade: C-

**Upper Major Core Courses**

**Note:** All upper major core courses must be completed before the capstone can be taken. A student must be listed as a major or minor in business to take these courses. Major or minor in Business is defined as junior standing with all primary lower core courses completed, a 2.0 cumulative GPA, and formal admission to the major or minor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 341	People, Process and Technology I	3
BGEN 342	People, Process and Technology II	3
BGEN 361	Principles of Business Law	3
BMKT 325	Principles of Marketing	3
Total Hours		15

Minimum Required Grade: C-

**Capstone and Upper-Division Writing Requirement**

**Notes:**

## University Of Montana

- Students must complete all primary and secondary lower core and upper core courses and their prerequisites and have an approved graduation application to register for their capstones.
- Students must pass the required comprehensive exam as well as all requisite coursework to earn a passing grade in BGEN 499.
- BGEN 499 must be taken at UM.
- This course also satisfies the UM and College of Business upper-division writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BGEN 499	Strategic Management	3
Total Hours		3

Minimum Required Grade: C-

## Marketing Major Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 360	International Business	3
BMKT 337	Consumer Behavior	3
BMKT 342	Marketing Research	3
BMKT 460	Marketing Hi-Tech Products and Innovation	3
BMKT 420	Integrated Online Marketing	3
Total Hours		15

Minimum Required Grade: C-

## Marketing Major Electives

### Notes:

- Up to 6 credits of BMGT 493 can count towards the 9 credit elective requirement.
- Up to 6 credits of BMKT 491 can count towards the 9 credit elective requirement.
- Up to 6 credits of BMKT 494 can count towards the 9 credit elective requirement.



University Of Montana

- Up to 3 credits of BMKT 498 can count towards the 9 credit elective requirement.

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
BMKT 440	Marketing Analytics	
BMKT 482	Telling Stories with Data	
BMKT 491	Special Topics	
<b>Complete 6 credits from the following courses:</b>		6
BMGT 401	Event Management	
BMGT 402	Prin of Entertainment Mgmt I	
BMGT 403	Prin of Entertainment Mgmt II	
BMGT 410	Sustainable Business Practices	
BMGT 467	Global Operations and Supply Chain Management	
BMGT 493	International Experience	
BMIS 478	E Commerce a Managerl Prspctv	
BMKT 343	Integrated Marketing Communication	
BMKT 411	Service and Relationship Marketing	
BMKT 412	Non Profit Marketing	
BMKT 413	Sports Marketing	
BMKT 494	Seminar	
BMKT 498	Internship	
COMX 351	Principles of Public Relations	
COMX 352	Public Relations Portfolio	
MART 101L	Intro to Media Arts	
MART 102	Digital Technology in the Arts	

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MART 111A	Intro to Photoshop	
MART 341	Intro to Web Design	
Total Hours		9

Minimum Required Grade: C-

# Digital Marketing Certificate

## Post-secondary Certificate - Digital Marketing

### College of Business

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Notes:**

- All students pursuing a Digital Marketing Certificate must also complete the degree requirements for one of the Business majors.
- The 3.0 GPA requirement pertains specifically to the 24 credits listed below, not a student's cumulative GPA.
- Please meet with a Digital Marketing Certificate advisor for assistance (see COB Advising for list of advisors by major).

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## Summary

Digital Marketing Certificate Requirements	18
Digital Marketing Certificate Electives	3
Total Hours	21

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## Digital Marketing Certificate Requirements

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
BMIS 326	Introduction to Data Analytics	3
BMIS 373	Business System Analy & Design	3
BMIS 478	E Commerce a Managerl Prspctv	3
BMKT 342	Marketing Research	3
BMKT 420	Integrated Online Marketing	3
BMKT 460	Mktg Hi-Tech Prod & Innov	3
Total Hours		18

Minimum Required Grade: C-

## Digital Marketing Certificate Electives

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CODE	TITLE	HOURS
<b>Complete three credits from the following courses:</b>		3
BMIS 326	Introduction to Data Analytics	
BMIS 365	Business App Development	
BMIS 372	Information Infrastructures	
BMIS 479	Introduction to Consulting	
BMKT 482	Telling Stories with Data	
CSCI 340	Database Design	
FORS 250	Intro to GIS for Forest Mgt	
GPHY 284	Intro to GIS and Cartography	
MART 101L	Intro to Media Arts	
MART 112A	Introduction to Film Editing	
MART 102	Digital Technology in the Arts	
MART 111A	Intro to Photoshop	
MART 341	Intro to Web Design	
Total Hours		3

Minimum Required Grade: C-

# Entertainment Management Certificate

## Post-secondary Certificate - Entertainment Management

College of Business

**Degree Specific Credits: 18**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

**Notes:**

- This certificate is open to all majors across campus.
- The 3.0 GPA requirement pertains specifically to the 18 credits listed below, not a student's cumulative GPA.
- Special Topics courses (x91) and a maximum of three internship credits (x98) may count towards Certificate electives if approved by the UMEM Program Director.

### Summary

Entertainment Management Certificate Requirements	9
Entertainment Management Certificate Electives	9
Total Hours	18

### Entertainment Management Certificate Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BMGT 401	Event Management	3
BMGT 402	Prin of Entertainment Mgmt I	3
BMGT 403	Prin of Entertainment Mgmt II	3
Total Hours		9

Minimum Required Grade: B

## Entertainment Management Certificate Electives

**Notes:**

- Up to 3 credits of BMGT 498 can count towards the 9 credits of electives.
- BMGT 498 must be an entertainment-based internship to count towards the 9 credits of electives.

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CODE	TITLE	HOURS
<b>Complete nine credits from the following courses:</b>		9
BFIN 205S	Personal Finance	
BGEN 220E	Business Ethics and Social Responsibility	
BMGT 101S	Intro to Entertainment Mgmt	
BMGT 275	Venue Management	
BMGT 375	Business of Film & Television	
BMGT 420	Leadership and Motivation	
BMGT 474	Entertainment Rsrch & Planning	
BMGT 498	Internship	
BMIS 478	E Commerce a Managerl Prspctv	
BMKT 412	Non Profit Marketing	
BMKT 413	Sports Marketing	
BMKT 420	Integrated Online Marketing	
MART 112A	Introduction to Film Editing	
MART 111A	Intro to Photoshop	
MUSI 130L	History of Jazz	
MUSI 132L	History of Rock & Roll	
MUSI 202L	Intro to Music Literature	
MUSI 302H	Music History II	
NPAD 466	Nonprofit Adm & Pub Svc	
THTR 370	Stage Management I	
Total Hours		9

Minimum Required Grade: B



# Entrepreneurship and New Venture Creation Certificate

## Post-Secondary Certificate - Entrepreneurship and New Venture Creation

### College of Business

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:**

- All student pursuing a Certificate in Entrepreneurship and New Venture Creation must also complete the degree requirements for one of the Business majors. This certificate is of particular interest to students interested in launching their own business venture, working for a startup, or launching new initiatives with more established businesses.
- A 2.0 GPA requirement pertains specifically to the 15 credits listed below, not a student s cumulative GPA.

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## Summary

Entrepreneurship and New Venture Creation Certificate Requirements	9
Entrepreneurship and New Venture Creation Certificate Electives	6
Total Hours	15

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## Entrepreneurship and New Venture Creation Certificate Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BMGT 448	Entrepreneurship	3
BMGT 458	Advanced Entrepreneurship	3
BMGT 498	Internship (or submit a written new venture idea for adjudication to the John Ruffatto Business Startup Challenge (BSC), be selected for participation and present their idea at the BSC)	3
Total Hours		9

**Entrepreneurship and New Venture Creation Certificate Electives**

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CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
BFIN 301	Analysis of Financial Statements	
BMGT 420	Leadership and Motivation	
BMGT 498	Internship (only for students using the Business Startup Challenge to satisfy requirements section above)	
BMIS 372	Information Infrastructures	
BMIS 373	Business System Analysis & Design	
BMIS 478	E Commerce a Managerl Prspctv	
BMKT 342	Marketing Research	
BMKT 420	Integrated Online Marketing	
BMKT 460	Mktg Hi-Tech Prod & Innov	
BMGT 492	Independent Study (with an Entrepreneurship Focus)	
Total Hours		6

Minimum Required Grade: C-

# Sustainable Business Strategy Certificate

## Post-secondary Certificate - Sustainable Business Strategy

College of Business

**Degree Specific Credits: 12**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

**Notes:**

- The 3.0 GPA requirement pertains specifically to the 12 credits listed below, not a student's cumulative GPA. In addition to the above requirements, students are required to complete the following:
  - Meet with a SBSC certificate advisor;
  - After completion of the two required courses, complete one "hands-on" experience to learn to apply and to demonstrate proficiency with sustainable business strategies and tools, as approved by the SBSC advisor (either an internship/service learning experience or case writing/submission; and
  - Attend and complete an assignment on two speaker presentations on topics relating to Sustainability & Business as approved by the SBSC advisor.
- Please meet with an SBSC advisor for assistance (see CoB Advising for list of advisors by major).

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## Summary

Sustainable Business Strategy Required Courses	6
Sustainable Business Strategy Elective Courses	6
Total Hours	12

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## Sustainable Business Strategy Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 445	Sustainability Reporting	3
BMGT 410	Sustainable Business Practices	3
Total Hours		6

Minimum Required Grade: C-

### Sustainable Business Strategy Elective Courses

**Note:** Only 3 credits of BMGT 493 can count towards the 6 required elective credits for the SBSC. BMGT 493 must be approved through SBSC advisor as having a focus on sustainability issues.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
BMGT 493	International Experience	
ECNS 445	Int Env Econ & Clim Change	
ENST 367	Environmental Politics & Policies	
ENST 487	Globalization, Justice & Environment	
GEO 482	Global Change	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 408	Global Cycles and Climate	
NRSM 475	Environment & Development	
Total Hours		6

Minimum Required Grade: C-

## College of Business Graduate Programs Overview

Opportunity for further study at the graduate level is offered through programs leading to the degrees of

- **Master of Accountancy (M-Acct.),**
- **Master of Business Administration (M.B.A.),**
- **Master of Science in Business Analytics (M.S.-B.A.)**
- Joint J.D./M.B.A.,
- Joint M.B.A./D.P.T. and
- Joint M.B.A./Pharm.D.

The M.B.A. M.S. - B.A. and M-Acct. programs are suited to all students regardless of undergraduate training. Students in the arts and sciences or other professional schools are encouraged to consider these graduate business programs. Further details may be obtained from the Graduate School or by specific inquiries directed to: Director of M.B.A. Program, College of Business, Director of M.S.-B. A. Program College of Business or Director of M-Acct. Program, College of Business.

## Foundation Program for Graduate Work in Business

Completion of all of the foundation courses listed below (or equivalents) prior to starting the program will reduce the time required for the M.B.A. or M-Acct. at the University of Montana-Missoula by one year; however, many of the courses listed below have prerequisites that are strictly enforced (including, without limitation, a general prerequisite that all upper-division business courses require the completion of each lower-core business course with a grade of C or better).

		Course List
CODE	TITLE	HOURS
Foundation Courses		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 361	Principles of Business Law	3
BFIN 322	Business Finance	3
BMIS 270	MIS Foundations for Business	3
BMGT 322	Operations Management	3
BMGT 340	Management & Organization Behavior	3
BMKT 325	Principles of Marketing	3
ECNS 201S	Principles of Microeconomics	3
STAT 216	Introduction to Statistics	4
Total Hours		31

Nine of the 10 courses in the Foundation Program are included in the undergraduate Minor in Business Administration, which is open to any undergraduate student. The College of Business also offers a series of five graduate-level courses that can substitute for the above undergraduate courses. These courses are only open to students who have already earned an undergraduate degree. For more information, please visit the University of Montana **College of Business Graduate School website**.

## Foundation Program for M.S.-B.A. Program

The M.S.-B.A. program is open to graduates of business and non-business undergraduate programs. The program can be completed in one year for students who have completed the following foundation courses, or their equivalent:

University Of Montana

		Course List
CODE	TITLE	HOURS
BMIS 326	Introduction to Data Analytics	3
BMKT 560	Marketing & Stats	3-7
or STAT 216 & BMKT 325	Introduction to Statistics and Principles of Marketing	
STAT 451	Statistical Methods I	3
Business analytics internship or work experience		
Total Hours		9-13

For more information, please visit the University of Montana **College of Business M.S.-B.A. website.**



## Master of Accountancy

The mission of the Montana MAcct program is to provide breadth and depth in accounting, auditing, taxation, and business to develop a high level of technical knowledge, technology awareness, and leadership capability for advancement in the accounting profession and other related business careers. In short, you'll learn to be a competent professional. You will complete a rigorous accounting core (18 cr) and have flexibility in choosing electives (12 cr), including internships and courses in the hottest topics facing accounting professionals. You will master both technical and soft skills such as teamwork and communication by frequently working together on projects and cases. All students must pass an exit exam at the end of the program to graduate.

## Master of Accountancy

### College of Business

**Degree Specific Credits:** 30

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## Requirements

### Accounting Core

- Accounting & Data Analytics
- Advanced Taxation
- Advanced Audit
- Advanced Financial Topics
- Accounting Theory
- Accounting Law & Ethics

### Sample Electives

- Tax Research
- Auditor Judgment
- Tax & Business Strategies
- VITA
- Accounting Problems (CPA prep)

## University Of Montana

- Sustainability Reporting
- Business Valuation
- Communicating Financial Information
- Business Writing
- Accounting Internship

## Master of Business Administration

The MBA program is a 32 credit-hour professional curriculum that requires 19 credits of core courses and 13 credits of electives. Depending on previous undergraduate coursework, students may be required to take an additional 15 credits of foundation courses. There is no thesis requirement for the MBA program; instead, students must complete an integrated project course that is part of the core course requirements.

Full-time students with a previous undergraduate degree in business can complete the accelerated program in one year. Part-time students can earn their degree in two to five years. For those who do not have an undergraduate degree in business, UM provides the required prerequisites in five online courses. Please visit our [foundation courses](#) link if you **do not** have an undergrad in business.

## Master of Business Administration

### College of Business

**Degree Specific Credits:** 32

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## MBA Assessment and Assurance of Learning Goals

As part of our assessment process and assurance-of-learning standards, the MBA Curriculum and Assessment Committee has adopted six learning goals for MBA students. MBA students will have an understanding of:

1. Integrated knowledge of business functions
2. Communication skills and teamwork ability
3. Ethical conduct, social responsibility and professional leadership
4. Analytical and innovative thinking in business problem solving
5. Knowledge and application of current trends in information technology
6. Ability to evaluate implications of operating in the global business environment

## Requirements

### Required Core Courses (19 credits)

#### Autumn Semester Offerings

<u>Course</u>	<u>Name</u>	<u>Credits</u>	<u>Offered</u>
ACTG 605	Administrative Controls	2	Wk. 1-10
BMGT 640	Organizational Behavior	2	Wk. 1-10
BMGT 650	Business Ethics	1	Wk. 11-15
BMGT 604	Competitive Strategy	1	Wk. 1-5
BMIS 674	Mgmt of Information Systems	2	Wk. 6-15
BFIN 681	Financial Management	2	Wk. 6-15

### Spring Semester Offerings

<u>Course</u>	<u>Name</u>	<u>Credits</u>	<u>Offered</u>
BMKT 660	Marketing Management	2	Wk. 1-10
BMIS 650	Quantitative Analysis	2	Wk. 1-10
BMGT 685	International Business	2	Wk. 6-15
MBA 603	Integrated Project	1	Wk. 11-15
BMGT 665	Strategic Management	2	Wk. 1-10

## Elective Courses (13 credits required)

### Fall, Spring, and Summer Offerings

Masters of Business Administration students can choose from a wide selection of electives. Most elective courses are offered as one credit weekend classes in Missoula. In addition, we offer several daytime on-campus and flex delivery electives. Students can receive credit for independent study and internships that help them gain practical experience in their field of interest. Finally, students have the option of completing a study abroad and / or participate in an exchange program to enhance their global training. Also acceptable, per approval, are up to 6 credits of 400-level courses taken for graduate credit.

## Master of Science in Business Analytics

The Masters of Business Analytics (MSBA) is a 32 credit, one year program, offered through flexible delivery, either on campus or off campus using Zoom technology. Upon completion of the program foundation classes, the one year MSBA consists of 20 credits of required courses and 12 credits of electives, to assist in self-designing a program to meet your individualized needs.

All coursework focuses on providing experience with both hard technical skills and soft business skills. The core curriculum includes the study of business intelligence, big data analytics, business statistics, statistical computing, data mining and management, and communicating insights based on data analysis and associated decision-making. Prior to starting the MSBA program, student must complete the required foundations courses.

## Master of Science in Business Analytics

### College of Business

**Degree Specific Credits:** 32

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## Requirements

### Foundations Courses (9 credits)

<u>Course</u>	<u>Name</u>	<u>Credits</u>	<u>Offered</u>
BMKT 560	Marketing & Statistics	3	All Term
STAT 451	Statistical Methods	3	Fall / Summer
BMIS 326	Intro to Data Analytics	3	All Terms
Internship / Work Experience			

### Required Core Courses (20 credits)

#### Autumn Semester Offerings

<u>Course</u>	<u>Name</u>	<u>Credits</u>
BMIS 642	Advanced Marketing Research	3
BMKT 670	Applied Data Analytics	3
BMIS 625	Text Mining of Unstructured Data	3

### Spring Semester Offerings

<u>Course</u>	<u>Name</u>	<u>Credits</u>
BMIS 601	Business Intelligence	3
BMIS 650	Quantitative Analysis	2
BMKT 680	Big Data & Innovation	3
BMKT 699	MSBA Capstone	

### Elective Courses (12 credits required)

A wide variety of elective opportunities allows students to customize the program to their own career goals.

The electives listed below are a sample of the electives that are available. Having an array of options allows students to design the MSBA program to meet their needs. Electives also include independent studies and internships.

- Integrated Online Marketing
- Data Visualization
- Applications of Mining Big Data
- Investigations
- Digital Tech in the Arts I
- Introduction to Consulting
- Mgmt of Information Systems

Explore full descriptions of core classes and electives in the MSBA program.

# Business Administration Minor

## Minor - Business Administration

College of Business

**Degree Specific Credits:** 28

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Primary Lower Core Courses	16
Upper Minor Core	12
Total Hours	28

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### Primary Lower Core Courses

**Notes:**

- Students must earn a "C-" or better in any prerequisites and primary lower core courses before taking the upper division business minor courses. These seven (7) courses must be completed with a 2.0 GPA.
- Student can apply to the Business Minor when they have a "C-" or better in all primary lower core courses, 60 credits, and a 2.0 primary lower core GPA.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
BMIS 270	MIS Foundations for Business	3
ECNS 201S	Principles of Microeconomics	3
STAT 216	Introduction to Statistics	4
or SOCI 202	Social Statistics	
or PSYX 222	Psychological Statistics	
or FORS 201	Forest Biometrics	
Total Hours		16

Minimum Required Grade: C-

## Upper Minor Core

### Notes:

- Three of the four upper minor core classes must be completed at the University of Montana - Missoula.
- These classes can only be taken after the application to the Business Minor has been approved.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BFIN 322	Business Finance	3
BGEN 361	Principles of Business Law	3
BMGT 340	Management & Organization Behavior	3
BMKT 325	Principles of Marketing	3
Total Hours		12

Minimum Required Grade: C-



# Business Certificate

## Post-secondary Certificate - Business

### College of Business

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Notes:**

- Students must complete the Business Certificate application (available from the COB advising office) for admission to the Business Certificate.
- The 3.0 GPA requirement pertains specifically to the 15 credits required for this certificate, not a student's cumulative GPA.

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## Summary

		Course List
CODE	TITLE	HOURS
Business Certificate Requirements		15
Total Hours		15

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## Business Certificate Re

**Note:** See individual course descriptions in the catalog for additional grade and prerequisite requirements.

University Of Montana

		Course List
CODE	TITLE	HOURS
Complete the following courses:		
ACTG 409	Financial Reporting and Control	3
BFIN 425	Principles of Financial Analysis	3
BMGT 440	Management and Legal Systems	3
BMIS 441	Systems and Operations	3
BMKT 445	Marketing and Stats	3
Total Hours		15

Minimum Required Grade: C-

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## College of Health

### Marketa Marvanova, Acting Dean

The College of Health houses six schools that provide undergraduate and graduate degrees for professional, clinical, and research careers. Opportunities to receive certificates and dual degrees are available as well as online programs for some degrees. Please see the schools' pages in the catalog for their undergraduate degrees or their websites for detailed information about specific degrees and programs. In addition, the College provides advising for pre-medical sciences and offers courses in the health sciences that are open to students in all majors. The College is a member of the campus-wide UM Health and Medicine (UMHM) program that connects students, degree programs, researchers, and community partners. The College is also associated with the Family Medicine Residency of Western Montana and the Western Montana AHEC.

### Schools within the College:

- School of Integrative Physiology and Athletic Training
- Skaggs School of Pharmacy
- School of Physical Therapy and Rehabilitation Science
- School of Public and Community Health Sciences
- School of Social Work
- School of Speech, Language, Hearing, and Occupational Sciences

## Degree Programs by School

### School of Integrative Physiology and Athletic Training

#### Undergraduate:

- Bachelor of Science in Integrative Physiology (B.S.) with the following concentrations:
  - Exercise Science - Applied
  - Exercise Science - Pre-Professional
  - Applied Human Physiology
  - Sports Medicine
  - Pre-Athletic Training

#### Graduate:

- Master of Athletic Training (M.A.T.)
- Master of Science in Integrative Physiology (M.S.) (optional specialization designations)
- Doctor of Philosophy in Integrative Physiology and Rehabilitative Sciences (Ph.D.)

## University Of Montana

### Skaggs School of Pharmacy

#### Undergraduate:

- Bachelor of Science in Pharmaceutical Sciences (B.S.P.S.) with the following concentrations:
  - Professional
  - Non-Professional

#### Graduate:

- Masters of Science (M.S.) in:
  - Medicinal Chemistry
  - Pharmaceutical Sciences and Drug Design
  - Toxicology
- Doctor of Philosophy (Ph.D.) in:
  - Medicinal Chemistry
  - Pharmaceutical Sciences and Drug Design
  - Toxicology

### School of Physical Therapy and Rehabilitation Science

- Doctor of Physical Therapy (D.P.T.)

### School of Public and Community Health

#### Undergraduate:

- Bachelor of Science in Public Health, including a 2+2 program and the following concentrations:
  - General Public Health
  - Community Health
  - Population Health
  - Global Health
- Certificate in Health Behavior Coaching

#### Graduate:

- Master of Public Health (M.P.H.) with concentrations in
  - Generalist
  - Community Health & Prevention Sciences

## University Of Montana

- Doctor of Philosophy in Public Health (Ph.D.)

### **School of Social Work**

#### **Undergraduate:**

- Bachelor of Arts in Social Work (B.A.), including a 2+2 program

#### **Graduate:**

- Master of Science in Social Work (M.S.W.)

### **School of Speech, Language, Hearing, and Occupational Sciences**

#### **Undergraduate:**

- Bachelor of Arts in Communicative Sciences & Disorders (B.A.)
- Speech Language Pathology Assistant Certificate
- Communicative Sciences and Disorders Certificate

#### **Graduate:**

- Master of Science in Speech Language Pathology (M.S.)
- Doctor of Philosophy in Speech Language and Hearing Sciences (Ph.D.)

# School of Integrative Physiology and Athletic Training

John Quindry, Chair

## Vision

*Creating a Healthy, Progressive Global Community*

## Mission

The School of Integrative Physiology and Athletic Training prepares graduates to be competitive entry-level professionals or candidates for advanced study in applied and clinical health professions. The faculty, staff, and students of the School of Integrative Physiology and Athletic Training engage in professional education, scholarly activity, and meaningful public service. The School emphasizes the integration of healthy lifestyles, basic science, preventative medicine, and clinical care across the lifespan.

The School of Integrative Physiology and Athletic Training (IPAT) will:

1. Provide high-quality education and experiential learning opportunities in order to foster professional competence in students and recent graduates.
2. Foster an environment of interprofessional learning and cooperation for future professionals in healthcare.
3. Contribute cutting-edge basic and applied research and scholarly activity in the field.
4. Invest in faculty and staff development to ensure students are optimally prepared for an evolving professional workplace.
5. Cultivate community relationships to serve students' needs, while providing outreach and service to our discipline, community, and university.

Student Learning Goals include

1. Identify the historical underpinnings of the fields of integrative physiology and athletic training, and understand how they influence modern practices in these fields.
2. Explain complex principles in the student's area of specialization using effective dissemination techniques, including oral and written communication skills.
3. Practice collaboration with peers and colleagues in the student's chosen area of specialization.
4. Utilize evidence-based practices in professional settings or applications.
5. Display a basic level of competence requisite for their chosen field of study or advanced study.
6. Provide service related to the student's area of specialization to the community.

Undergraduate students major in Integrative Physiology and choose from one of the following concentrations:

## University Of Montana

- Applied Human Physiology
- Exercise Science Applied
- Exercise Science Pre-Professional
- Sports Medicine
- Pre-Athletic Training

The **Applied Human Physiology concentration** is for students seeking to pursue post-baccalaureate education in health science occupations. This specific concentration continues to provide students with an in-depth science background in Human Physiology, Exercise Science, and Athletic Training. The core science requirement allows for a better fit degree for students who are interested specifically in attending Physician Assistant (PA), Occupational Therapy (OT), Cardiac Rehabilitation (CR), Nutrition, or Nursing (RN) programs after they finish their degree. Successful graduates of this concentration should possess the knowledge and skills to qualify for the American College of Sports Medicine Certified Clinical Exercise Physiologist certification (requires additional clinical hours).

The **Exercise Science Applied concentration** is designed to prepare students for jobs as strength and conditioning coaches, athletic coaches, personal trainers, elderly services providers, corporate wellness personnel and directors, fitness center directors and other fitness related jobs or graduate studies in Exercise Science. Successful graduates of this concentration should possess the knowledge and skills to qualify for the American College of Sport Medicine Certified Exercise Physiologist certification and/or National Strength and Conditioning Association Certified Strength and Conditioning Specialist.

The **Exercise Science Pre-Professional concentration** is for students planning to continue in higher education and is designed to provide students with an in-depth science background and prepares students for post-baccalaureate study in exercise physiology and related health sciences such as Medical School, Dental School, Physical Therapy (PT), or other medical programs. Elective combinations can be tailored to career interests so that students can complete the required pre-requisite courses for graduate health science degrees. Successful graduates of this concentration should possess the knowledge and skills to qualify for the American College of Sports Medicine Certified Clinical Exercise Physiologist certification (requires additional clinical hours).

The **Sports Medicine concentration** is for students planning to continue on in higher education in Athletic Training, Exercise Science or other health related professions. Successful graduates of this concentration will possess an understanding of exercise and fitness and their relationship to human physiology, as well as the skills to prevent, evaluate and treat sports injuries.

The **Pre-Athletic Training concentration** is designed for students interested in applying for the Master's in Athletic Training Program (see information below).

The **Master's in Athletic Training** Program prepares competent entry-level athletic trainers for employment in educational and clinical settings or post-graduate study. The Athletic Training curriculum is designed to help students develop competency in evidence based medicine, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, psychosocial strategies and referral, healthcare administration and professional development and responsibility. Successful graduates should possess the knowledge and skills to qualify for the Board of Certification Examination.

## Activity Classes

The School of Integrative Physiology and Athletic Training also provides a large activity program (ACT classes numbered 100-299, and ACTV 189 ) which includes instruction in a wide variety of individual, team, recreational, and fitness activities. Goals of this program include helping students:

1. Develop and maintain long-term health-related fitness,
2. Develop motor performance skills that facilitate regular and continuous participation in physical activity, and
3. Develop the adult "inner athlete" who continually strives to reach optimal potential through involvement in challenging endeavors.

Any University of Montana student may elect to apply up to four credits toward a baccalaureate degree. For descriptions of the activity classes offered, refer to the website.

## Special Degree Requirements

All Integrative Physiology majors must earn a minimum grade of a C- in all required courses, including prerequisites, except for special cases of higher requirements in Athletic Training noted below. In-department and out-of-department courses specifically listed in this catalog as requirements for Integrative Physiology majors must be taken for a traditional letter grade.

## Admission Policies for the Master's in Athletic Training Degree Program

### Athletic Training Program (ATP)

The University of Montana-Missoula offers an accelerated entry-level Master's in Athletic Training (MAT) program housed within the School of Integrative Physiology and Athletic Training. The program meets the standards established by the Commission on Accreditation of Athletic Training Education (CAATE). The MAT Program was granted CAATE accreditation in 2015. The ATP is a demanding curriculum which requires dedication and commitment. Upon completion there are a variety of professional career opportunities.

The University of Montana offers an accelerated MAT Program. This program allows students to take three years of pre-requisite courses and general education requirements, followed by 2 years full time in a MAT program, including summers. There are two ways in which a student may attain a Master's Degree in Athletic Training:

**Option 1:** A five-year program in which students earn a Bachelor of Science Degree in Integrative Physiology and a Master's Degree in Athletic Training. (Note: Both the Bachelors degree and Master's degree will be officially awarded at the time of graduation.)

**Option 2:** A two-year master s program designed for students who already have a baccalaureate degree.

Upon completion of the MAT Program, students will be eligible to sit for the Board of Certification (BOC) Exam



## University Of Montana

Following are the requirements for application, admission, and retention of the Athletic Training Program (ATP). Academic advisors are available to assist students with this interesting and challenging professional program.

### **Admission.**

Students who desire admission into the Master's in Athletic Training Program must submit a formal application to ATCAS.

**Early Admission consideration:** Students may submit their application for early consideration by November 1st. Up to half of the cohort may be filled at this time depending on the qualifications of the applicants. Applicants not accepted during early admission will still be considered with the regular admissions cycle unless the applicant does not meet the minimum application criteria.

**Regular Admissions:** Applications and supporting materials are due no later than February 1st. Applications received after the deadline will be considered on a rolling admissions basis if available slots exist. Students are encouraged to apply by the February 1st deadline, as the program will likely reach capacity at that point. Applications received after the deadline will be considered on a rolling admissions basis if available slots exist.

Formal notification of admission to the Master's program will be made in writing.

Candidates who are NOT admitted to the program will also receive written notification of this decision. Students may be selected as alternates and if a vacancy should become available prior to summer semester, these students will be informed. Not all qualified candidates may be admitted to the Master's program due to limited enrollment in clinical experiences.

### **ADMISSION REQUIREMENTS & APPLICATION STEPS FOR MASTER'S PROGRAM**

1. Submit Athletic Training Student Application through ATCAS (found online at: <https://atcas.liaisoncas.com>) (pay application fee to ATCAS).
2. Students must have a minimum GPA of 3.0 for all college coursework (a GPA below 3.0 may be considered).
3. Completed pre-requisite courses with a grade of "C" or better (students may be enrolled in pre-requisite courses at time of application). Prerequisite coursework must be completed prior to the start of the professional program.
4. Official transcript(s) of all college coursework (submit to ATCAS). Obtain a current official copy of all college course work. Students must complete or be in the process of completing required course work prior to application to the professional athletic training program.
5. Submit 3 professional letters of recommendation (submit to ATCAS).
  - All recommendations must be received by **November 1st/February 1st**.
  - Please do not request recommendations from personal friends. (At least one letter from a Certified Athletic Trainer is strongly recommended.)
6. Application essay which should address your professional goals and desire for pursuing athletic training as a career. (submit to ATCAS)

## University Of Montana

7. Current resume (submit to ATCAS).
8. Program Interview – in person, video conference, or by phone.
9. Submit secondary application to the University of Montana’s Graduate School upon acceptance to MAT program (<http://www.umt.edu/grad/apply/default.php>) (separate application fee from ATCAS).

### **Professional ATP**

As a student in the Master’s in Athletic Training Program at the University of Montana, students must meet the following retention standards:

- enroll as a full-time student (some exceptions allowed as approved by Program Director).
- maintain a cumulative grade point average of 3.00 or higher.
- achieve no more than 2 “C” grades in graduate courses.
- achieve no less than a “C” grade in graduate courses.
- achieve satisfactory evaluations in each Clinical Phase before progressing.
- successfully complete coursework in the sequence indicated by the program of study unless approved by Athletic Training Program Director.
- abide by the Code of Ethics of the University and those established by the National Athletic Trainers’ Association.

### **Additional Costs Associated with ATP Program**

There will be additional costs (above tuition and fees: <https://www.umt.edu/finaid/cost-of-attendance/default.php>) for the clinical rotations. Program fee: There is an additional fee of \$1158/semester in addition to regular tuition and fees. This fee will help cover the cost of lab equipment, accreditation costs, adjunct teaching, and software. Other costs may include, but are not limited to: criminal background check (\$55), vaccinations (\$50) and NATA membership fee (\$60).

Transportation is needed for all off-campus clinical sites. Each student will have a minimum of one off-campus site. Any concerns about transportation to off-campus sites should be communicated with the Coordinator of Clinical Education immediately.

The MAT curriculum includes training in skills that may require additional certification beyond Athletic Training, including but not limited to Graston Soft Tissue Manipulation Technique and NASM Performance Exercise Specialist. The required educational material to sit for these complementary certifications is embedded within course curriculum; however, additional costs to receive the certifications are expected. These certifications are not mandated nor will they effect the eligibility to sit for the athletic training certification exam. UMAT Students will receive discounted prices (Graston - \$300, PES - \$500) if they choose to obtain these additional certifications. These pricing options may vary and are not controlled by the UM ATP.

## **General Integrative Physiology Program Requirements**

### **First Aid and CPR Exit Certifications**

## University Of Montana

All Integrative Physiology majors are required to have the appropriate certification in Basic Life Support at graduation.

Academic credit for ECP 120 will not be awarded for certifications earned at off-campus approved agencies other than the School of Integrative Physiology and Athletic Training at the University of Montana.

## Upper-division Writing Expectation

The School of Integrative Physiology and Athletic Training offers two upper-division writing courses to fulfill the General Education writing requirements; KIN 447 and AHAT 342/AHAT 343.

The typical student may take more than four years to complete these requirements.

## Baccalaureate Degrees in Integrative Physiology

- Integrative Physiology B.S., Exercise Science – Applied Concentration
- Integrative Physiology B.S., Exercise Science – Pre-Professional Concentration
- Integrative Physiology B.S., Exercise Science – Sports Medicine Concentration
- Integrative Physiology B.S. - Applied Human Physiology Concentration
- Integrative Physiology B.S. - Pre-Athletic Training Concentration

## Graduate Degrees in Integrative Physiology

The School of Integrative Physiology and Athletic Training also offer exercise science focused graduate degrees in Integrative Physiology at the Masters and Doctoral level. Masters degree options include a research concentration for students with careers directed toward terminal degrees (clinical or research doctorates), and an applied concentration for students with career interests in clinical (e.g., cardiac rehabilitation), fitness/wellness, coaching, and training. The Doctoral degree in Integrative Physiology and Rehabilitation Sciences serves research-minded students with a career interest in academia, industry, and as an additional credential for collaborative work with physical therapy and other rehabilitation sciences.

- Integrative Physiology M.S, Applied concentration
- Integrative Physiology, M.S. Research concentration
- Integrative Physiology and Rehabilitation Sciences, Ph.D.

## Exercise Science - Applied, Integrative Physiology B.S.

### Bachelor of Science - Integrative Physiology; Exercise Science - Applied Concentration

College of Health

**Degree Specific Credits:** 91-94

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Departmental Required Courses	9
Outside Major Lower-Division Required Courses	31-34
Upper-Division Departmental Required Courses	22
Outside Major Upper-Division Required Courses	8
Elective Courses	18
Total Hours	91-94

### Lower-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
KIN 201	Basic Exercise Prescription	3
KIN 205	Foundations of HHP	3
NUTR 221N	Basic Human Nutrition	3
Total Hours		9

Minimum Required Grade: C-

## Outside Major Lower-Division Required Courses

**Note:** Students interested in Medical School should pay special attention to those additional requirements. Please meet with the Medical School Adviser in the Integrative Physiology Department if you intend to also major in Pre-Medical studies.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 160N	Principles Of Living Systems	
BIOH 112	Human Form And Function I	
BIOH 113	Human Form And Function II	
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry OR CHMY 141 OR CHMY 143	4
CHMY 123	Introduction to Organic and Biochemistry OR CHMY 221 OR CHMY 223	4
CHMY 124	Introduction to Organic and Biochemistry Lab OR CHMY 222 or CHMY 224	2
COMX 111A	Introduction to Public Speaking	3
PHSX 205N	College Physics I	4

University Of Montana

or PHSX 215N	Fundamentals of Physics w/ Calculus I	
PHSX 206N	College Physics I Laboratory	1
or PHSX 216N	Fundamentals of Physics w/ Calculus I Lab	
PSYX 100S	Intro to Psychology	3
<b>Complete one of the following:</b>		4-6
M 151 or M 162 or M 172	Precalculus, Applied Calculus, or Calculus II	
M 121 & M 122	College Algebra and College Trigonometry	
<b>Complete one of the following:</b>		3-4
STAT 216	Introduction to Statistics	
PSYX 222	Psychological Statistics (must be pre-approved by advisor)	
SOCI 202	Social Statistics (must be pre-approved by advisor)	
EDU 421	Statistical Procedures in Educ (must be pre-approved by advisor)	
Total Hours		31-34

Minimum Required Grade: C-

**Upper-Division Departmental Required Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
KIN 320	Exercise Physiology	3
KIN 321	Exercise Physiology Lab	1
KIN 330	Motor Learning and Control	3
KIN 425	Biomechanics	3
KIN 447	Analytical & Communicative Techniques	3
or AHAT 342	Therapeutic Interventions	
KIN 498	Internship	3
NUTR 411	Nutrition For Sports & Exercise	3
Total Hours		22

Minimum Required Grade: C-

### Outside Major Upper-Division Required Courses

**Note:** It is strongly recommended that students take either BIOH 112 OR BIOH 113 OR BIOB 160N prior to taking Anatomy and Physiology.

## University Of Montana

		Course List
<b>Complete one of the following Anatomy and Physiology Sequences:</b>		8
<b>University of Montana - Mountain Campus</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	
<b>Missoula College</b>		
BIOH 201N & BIOH 211N	Human Anat Phys I (equiv 301) and Human Anat Phys II (equiv 311)	
Total Hours		8

Minimum Required Grade: C-

## Elective Courses

CODE	TITLE	HOURS
<b>Complete the following elective credits:</b>		18
Electives require adviser consent. Students should take an appropriate number of upper-division electives to achieve 39 Upper Division Credits, per UM graduation requirements. Students should largely use elective courses to meet the additional prerequisite course requirements of graduate programs where they hope to apply or to meet career goals.		

Minimum Required Grade: C-



# Exercise Science - Pre-Professional, Integrative Physiology B.S.

## Bachelor of Science - Integrative Physiology; Exercise Science - Pre-Professional Concentration

### College of Health

**Degree Specific Credits:** 106-111

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

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Lower-Division Departmental Required Courses	9
Outside Major Lower-Division Required Courses	49-56
Upper-Division Departmental Required Courses	22
Outside Major Upper-Division Required Courses	8
Elective Courses	18
Total Hours	106-111

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### Lower-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
KIN 201	Basic Exercise Prescription	3
KIN 205	Foundations of HHP	3
NUTR 221N	Basic Human Nutrition	3
Total Hours		12

Minimum Required Grade: C-

### Outside Major Lower-Division Required Courses

**Notes:** Students interested in medical or dental school should replace CHMY 121N, CHMY 123 and CHMY 124 with CHMY 141N/CHMY 142N, CHMY 143N/CHMY 144N, CHMY 221/CHMY 222, and CHMY 223/CHMY 224. Students interested in physical therapy or other graduate medical professions generally take CHMY 121N, CHMY 123 and CHMY 124. You should talk to the IPAT advisors prior to starting your chemistry series

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		8
BIOH 112	Human Form and Function I	
or BIOH 113	Human Form and Function II	
or BIOB 160N	Principles of Living Systems	
<b>Complete all of the following courses:</b>		
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
<b>General Chemistry - Complete one of the following:</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	

<b>Organic and Biochemistry - Complete one of the following series:</b>		4-6
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
or CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
or CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
<b>Mathematics - Complete one of the following:</b>		4-6
M 121 & M 122	College Algebra and College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
or M 171	Calculus I	
<b>Complete one of the following physics sequences:</b>		10
<b>Algebra- and Trigonometry-based:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	

<b>Complete one of the following courses:</b>		3-4
STAT 216	Introduction to Statistics (must be pre-approved by advisor)	
PSYX 222	Psychological Statistics (must be pre-approved by advisor)	
SOCI 202	Social Statistics (must be pre-approved by advisor)	
EDU 421	Statistical Procedures in Educ (must be pre-approved by advisor)	
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
PSYX 100S	Intro to Psychology	3
Total Hours		49-56

Minimum Required Grade: C-

### Upper-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
KIN 320	Exercise Physiology	3
KIN 321	Exercise Physiology Lab	1
KIN 330	Motor Learning and Control	3
KIN 447	Analytical & Communicative Techniques	3
or AHAT 342	Therapeutic Interventions	
KIN 460	ECG Assessment	2
KIN 483	Exercise Disease & Aging	3
KIN 484	Exercise Disease & Aging Lab	1
KIN 498	Internship	3
or KIN 499	Capstone	
Total Hours		22

Minimum Required Grade: C-

## Outside Major Upper-Division Required Courses

**Notes:** It is strongly recommended that students take either BIOH 112 OR BIOH 113 OR BIOB 160N prior to taking Anatomy and Physiology. Students who take the BIOH 201N and BIOH 211N Anatomy and Physiology series may need to take additional upper-division credits beyond the courses required in this concentration to meet the university of Montana requirement of 39 upper-division credits for graduation.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Anatomy and Physiology sequences:</b>		8
<b>University of Montana - Mountain Campus</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	
<b>Missoula College</b>		
BIOH 201N & BIOH 211N	Human Anat Phys I (equiv 301) and Human Anat Phys II (equiv 311)	
Total Hours		8

Minimum Required Grade: C-

## Elective Courses

CODE	TITLE	HOURS
<b>Complete the following elective credits:</b>		18
Electives require adviser consent. Students should take an appropriate number of upper-division electives to achieve 39 upper-division credits, per UM graduation requirements. Students should use elective courses to meet the additional prerequisite course requirements of graduate programs they are interested in attending.		

Minimum Required Grade: C-

# Applied Human Physiology, Integrative Physiology B.S.

## Bachelor of Science - Integrative Physiology; Applied Human Physiology Concentration

College of Health

**Degree Specific Credits:** 78-85

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Departmental Required Courses	15
Outside Major Lower-Division Required Courses	33-40
Upper-Division Departmental Required Courses	22
Outside Major Upper-Division Required Courses	8
Total Hours	78-85

### Lower-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
HTH 110	Personal Health and Wellness	3
KIN 201	Basic Exercise Prescription	3
KIN 205	Foundations of HHP	3
NUTR 221N	Basic Human Nutrition	3
Total Hours		15

Minimum Required Grade: C-

## Outside Major Lower-Division Required Courses

**Notes:** Students interested in graduate medical professions in this concentration generally take CHMY 121N, CHMY 123 and CHMY 124. You should talk to the IPAT advisors prior to starting your chemistry series.

Students interested in Physician Assistant training should take BIOB 160N/161N for their introductory biology course.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
BIOH 112	Human Form And Function I	
BIOH 113	Human Form And Function II	
BIOH 160N and BIOH 161N	Principles of Living Systems and Principles of Living Systems Lab	
<b>General Chemistry - Complete one of the following:</b>		4-6
CHMY 121N	Introduction to General Chemistry	
CHMY 141N and CHMY 142N	College Chemistry I and College Chemistry I Lab	



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CHMY 143N and CHMY 144N	College Chemistry II and College Chemistry II Lab	
<b>Organic and Biochemistry - Complete one of the following sequences:</b>		4-6
CHMY 123 and CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
CHMY 221 and CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 and CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
<b>Mathematics - Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Math	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
M 171	Calculus I	
<b>Microbiology - Complete one of the following sequences:</b>		4
BIOM 250N and BIOM 251	Microbiology for Health Sciences and Microbiology for Health Sciences Lab	
BIOM 360 and BIOM 361	General Microbiology and General Microbiology Lab	
<b>Statistics - Complete one of the following courses:</b>		3-4
STAT 216	Introduction to Statistics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
EDU 421	Statistical Procedures in Education	

<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
PSYX 100S	Intro to Psychology	3
<b>Complete one of the following courses:</b>		3
PSYX 230	Developmental Psychology	
PSYX 340	Abnormal Psychology	
<b>Complete one of the following courses:</b>		3
ANTY 101H	Introduction to Anthropology	
NASX 105H	Introduction to Native American Studies	
Total Hours		33-40

Minimum Required Grade: C-

### Upper-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
KIN 320	Exercise Physiology	3
KIN 321	Exercise Physiology Lab	1
KIN 330	Motor Learning and Control	3
KIN 447	Analytical & Communicative Techniques	3
or AHAT 342	Therapeutic Interventions	
KIN 460	ECG Assessment	2
KIN 483	Exercise Disease and Aging	3
KIN 484	Exercise Disease and Aging Lab	1
KIN 498 or KIN 499	Internship or Capstone	3
Total Hours		22

Minimum Required Grade: C-

### Outside Major Upper-Division Required Courses

**Note:** It is strongly recommended that students take either BIOH 112 OR BIOH 113 OR BIOB 160N prior to taking Anatomy and Physiology.

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		Course List
<b>Complete one of the following Anatomy and Physiology Sequences:</b>		8
<b>University of Montana - Mountain Campus</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	
<b>Missoula College</b>		
BIOH 201N & BIOH 211N	Human Anatomy and Physiology I (equiv 301) and Human Anatomy and Physiology II (equiv 311)	
Total Hours		8

Minimum Required Grade: C-

## Sports Medicine, Integrative Physiology B.S.

### Bachelor of Science - Integrative Physiology; Sports Medicine Concentration

College of Health

**Degree Specific Credits:** 98-105

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Departmental Required Courses	12
Outside Major Lower-Division Required Courses	39-46
Upper-Division Departmental Required Courses	39
Outside Major Upper-Division Required Courses	8

### Lower-Division Required Courses

**Note:** Students should take ECP 120 within two years of graduation in order to ensure current certification. Students may substitute outside Emergency Medical Responder Certification for these courses.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHAT 210	Prevention and Care of Athletic Injuries	2
AHAT 213	Prevention and Care of Athletic Injuries Lab	1
KIN 201	Basic Exercise Prescription	3
KIN 205	Foundations of HHP	3
NUTR 221N	Basic Human Nutrition	3
Total Hours		12

Minimum Required Grade: C-

## Outside Major Lower-Division Required Courses

**Note:** Students interested in Medical School should pay special attention to those additional requirements. Please meet with the Medical School Adviser in the School of Integrative Physiology and Athletic Training if you intend to also work towards Pre-Medical studies.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOH 112	Human Form and Function I	
BIOH 113	Human Form and Function II	
BIOB 160N	Principles of Living Systems	
<b>General Chemistry - Complete one of the following :</b>		4-5
CHMY 121N	Introduction to General Chemistry	
or CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
or CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
<b>Organic and Biochemistry - Complete one of the following sequences:</b>		5-6

CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
or CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
or CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
<b>Mathematics - Complete one of the following:</b>		4-6
M 121 & M 122	College Algebra and College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
or M 171	Calculus I	
<b>Complete one of the following physics sequences:</b>		5
<b>Algebra- and Trigonometry-based:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
<b>Calculus-based:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
<b>Statistics - Complete one of the following courses:</b>		3-4
STAT 216	Introduction to Statistics (must be pre- approved by advisor)	
or PSYX 222	Psychological Statistics (must be pre- approved by advisor)	
or SOCI 202	Social Statistics (must be pre-approved by advisor)	

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or EDU 421	Statistical Procedures in Educ (must be pre-approved by advisor)	
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
PSYX 100S	Intro to Psychology	3
Total Hours		39-46

Minimum Required Grade: C-

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**Upper-Division Departmental Required Courses**



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHAT 324	Assessment of the Extremities	2
AHAT 325	Assessment of the Extremities Lab	1
AHAT 342	Therapeutic Interventions	2
AHAT 343	Therapeutic Interventions Lab	1
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
KIN 310	Strength Training, and Conditioning	2
KIN 320	Exercise Physiology	3
KIN 321	Exercise Physiology Lab	1
KIN 322	Kinesiology	3
KIN 323	Anatomical Kinesiology Lab	1
KIN 330	Motor Learning and Control	3
KIN 410	Advanced Strength Training Methods	3
KIN 425	Biomechanics	3
KIN 440	Sport Psychology	3
KIN 460	ECG Analysis	2
KIN 499	Capstone	3
NUTR 411	Nutrition For Sports & Exercise	3
Total Hours		39

Minimum Required Grade: C-

## Outside Major Upper-Division Required Courses

**Note:** It is strongly recommended that students take either BIOH 112 OR BIOH 113 OR BIOB 160N prior to taking Anatomy and Physiology. Students who take the BIOH 201N and BIOH 211N Anatomy and Physiology series may need to take additional upper division credits beyond the courses required in this concentration to

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meet the university of Montana requirement of 39 upper-division credits for graduation.

CODE	TITLE	HOURS
<b>Complete one of the following Anatomy and Physiology Sequences:</b>		<b>8</b>
<b>University of Montana - Mountain Campus</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	
& BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	
<b>Missoula College</b>		
BIOH 201N & BIOH 211N	Human Anat Phys I (equiv 301) and Human Anat Phys II (equiv 311)	
Total Hours		<b>8</b>

Minimum Required Grade: C-

## Pre-Athletic Training, Integrative Physiology B.S.

### Bachelor of Science - Integrative Physiology; Pre-Athletic Training Concentration

#### College of Health

**Degree Specific Credits:** 102-104

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The B.S. in Integrative Physiology, Pre-Athletic Training Concentration is restricted to students admitted to the Master of Athletic Training (MAT) program. To be eligible for certification and licensure as an Athletic Trainer, students must obtain the MAT degree. The BS Integrative Physiology, Pre-Athletic Training Concentration is awarded at the same time as the MAT. See the Master in Athletic Training catalog page for more information.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

#### Summary

Lower-Division Departmental Required Courses	12
Outside Major Lower-Division Required Courses	37-39
Upper-Division Departmental Required Courses	23
Outside Major Upper-Division Required Courses	8
Professional Program Courses	16
Elective Courses	6
Total Hours	102-104

#### Lower-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHAT 210	Prevention & Care of Athletic Injuries	2
AHAT 213	Prevention & Care of Athletic Injuries Lab	1
KIN 201	Basic Exercise Prescription	3
KIN 205	Foundations of HHP	3
NUTR 221N	Basic Human Nutrition	3
Total Hours		12

Minimum Required Grade: C-

## Outside Major Lower-Division Required Courses

**Notes:** Students interested in medical or dental school should replace CHMY 121N, CHMY 123 and CHMY 124 with CHMY 141N/CHMY 142N, CHMY 143N/CHMY 144N, CHMY 221/CHMY 222, and CHMY 223/CHMY 224. Students interested in physical therapy or other graduate medical professions generally take CHMY 121N, CHMY 123 and CHMY 124. You should talk to the HHP advisors prior to starting your chemistry series

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOH 112	Human Form and Function I	
or BIOH 113	Human Form and Function II	
or BIOB 160N	Principles of Living Systems	
<b>Complete all of the following courses:</b>		
BIOM 250N	Microbiology for Hlth Sciences	3
CHMY 121N	Intro to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
COMX 111A	Introduction to Public Speaking	3

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PHAR 110N	Use & Abuse of Drugs	3
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Laboratory	1
PSYX 100S	Introduction to Psychology	3
<b>Mathematics - Complete one of the following:</b>		4-6
M 121 & M 122	College Algebra and College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
or M 171	Calculus I	
<b>Complete one of the following courses:</b>		3-4
STAT 216	Introduction to Statistics (must be pre-approved by advisor)	
or PSYX 222	Psychological Statistics (must be pre-approved by advisor)	
or SOCI 202	Social Statistics (must be pre-approved by advisor)	
or EDU 421	Statistical Procedures in Educ (must be pre-approved by advisor)	
Total Hours		37-39

Minimum Required Grade: C-

## Upper-Division Departmental Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	3
KIN 320	Exercise Physiology	3
KIN 321	Exercise Physiology Lab	1
KIN 322	Kinesiology	3
KIN 323	Anatomical Kinesiology Lab	1
KIN 330	Motor Learning and Control	3
KIN 425	Biomechanics	3
KIN 447	Analytical & Communicative Techniques	3
or AHAT 342	Therapeutic Interventions	
NUTR 411	Nutrition for Sports & Exercise	3
Total Hours		23

Minimum Required Grade: C-

## Outside Major Upper-Division Required Courses

**Notes:** Students are required to take either BIOH 112 OR BIOH 113 OR BIOB 160N prior to taking Anatomy and Physiology. Students who take the BIOH 201N and BIOH 211N Anatomy and Physiology series may need to take additional upper division credits beyond the courses required in this concentration to meet the university of Montana requirement of 39 upper-division credits for graduation.

CODE	TITLE	HOURS
<b>Complete one of the following Anatomy and Physiology sequences:</b>		8
<b>University of Montana - Mountain Campus</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	
<b>Missoula College</b>		
BIOH 201N & BIOH 211N	Human Anat Phys I (equiv 301) and Human Anat Phys II (equiv 311)	
Total Hours		8

Minimum Required Grade: C-

## Professional Program Courses

**Note:** Only students who are accepted into the Professional Master's in Athletic Training program are eligible for these courses. These 16 credits count towards completion of the BS in Integrative Physiology.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ATEP 534	Athletic Training Techniques I	3
ATEP 540	Practicum in Athletic Training I	3
ATEP 541	Practicum in Athletic Training II	3
ATEP 542	Lower Extremity Assessment	3
ATEP 566	Therapeutic Modalities	3
ATEP 569	Clinical Anatomy Lab	1
Total Hours		16

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete the following elective credits:</b>		18
Electives require adviser consent. Students should take an appropriate number of upper-division electives to achieve 39 upper-division credits, per UM graduation requirements. Students should largely use elective courses to meet the additional prerequisite course requirements of graduate programs or to meet career goals.		

Minimum Required Grade: C-



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# **Athletic Training M.A.T.**

## **Master of Athletic Training**

College of Health

**Degree Specific Credits: 58**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

## **Degree Requirements**

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ATEP 534	Athletic Training Techniques I	3 credits
ATEP 542	Lower Extremity Assessment	3 credits
ATEP 540	Practicum in Athletic Training I	3 credits
ATEP 566	Therapeutic Modalities	3 credits
ATEP 569	Clinical Anatomy Lab	1 credit
HHP 520	Educational Research	3 credits
ATEP 544	Upper Extremity Assessment	3 credits
NUTR 411	Nutrition for Sport & Exercise	3 credits
ATEP 541	Practicum in Athletic Training II	3 credits
HHP 523	Case Studies in Sport Psychology	3 credits
ATEP 572	Therapeutic Exercise	3 credits
ATEP 535	Athletic Training Techniques II (Online)	3 credits
ATEP 574	Manual Therapy Techniques	3 credits
ATEP 550	Practicum in Athletic Training III	3 credits
HHP 699	Thesis	3 credits
ATEP 599	Capstone: Research in AT	3 credits
ATEP 578	Org & Admin in Athletic Training (Online)	3 credits
ATEP 546	General Medical Assessment	3 credits
ATEP 551	Practicum in Athletic Training IV	3 credits
ATEP 580	Pharmacology in Sports Medicine (Online)	3 credits
Elective	Capstone Option	3 credits

Program fee: There is an additional fee of \$1124/semester in addition to regular tuition and fees. This fee will help cover the cost of lab equipment, accreditation costs, adjunct teaching, and software. Other fees may include, but are not limited to: criminal background check (\$55), vaccinations (\$50) and NATA membership fee (\$60).

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Students who desire admission into the Master's in Athletic Training Program must submit a formal application to ATCAS.

**Early Admission consideration:** Students may submit their application for early consideration by November 1st. Up to half of the cohort may be filled at this time depending on the qualifications of the applicants. Applicants not accepted during early admission will still be considered with the regular admissions cycle unless the applicant does not meet the minimum application criteria.

**Regular Admissions:** Applications and supporting materials are due no later than February 1st. Applications received after the deadline will be considered on a rolling admissions basis if available slots exist. Students are encouraged to apply by the February 1st deadline, as the program will likely reach capacity at that point. Applications received after the deadline will be considered on a rolling admissions basis if available slots exist.

Formal notification of admission to the Master's program will be made in writing.

Candidates who are NOT admitted to the program will also receive written notification of this decision. Students may be selected as alternates and if a vacancy should become available prior to summer semester, these students will be informed. Not all qualified candidates may be admitted to the Master's program due to limited enrollment in clinical experiences.

### ADMISSION REQUIREMENTS FOR PROFESSIONAL ATHLETIC TRAINING PROGRAM (ATP)

1. Submit Athletic Training Student Application through ATCAS (found online at: <https://atcas.liasoncas.com>) (pay application fee to ATCAS)
2. Students must have a minimum GPA of 3.0 for all college coursework (a GPA below 3.0 may be considered)
3. GRE Scores (or test equivalent) (submit to ATCAS) A minimum score of 300 combined quantitative and verbal and a writing score of 3 is preferred; however, students may be considered if scores fall below these marks (contact Program Director for additional information).
4. Completed pre-requisite courses with a grade of "C" or better (students may be enrolled in pre-requisite courses at time of application)
5. Official transcript(s) of all college coursework (submit to ATCAS). Obtain a current official copy of all college course work. Students must complete or be in the process of completing required course work prior to application to the professional athletic training program.
6. Submit 3 professional letters of recommendation (submit to ATCAS)
  - All recommendations must be received by **November 1st/February 1st.**
  - Please do not request recommendations from personal friends. (At least one letter from a Certified Athletic Trainer is strongly recommended.)
7. Application essay which should address your professional goals and desire for pursuing athletic training as a career. (submit to ATCAS)
8. Current resume (submit to ATCAS)
9. Program Interview- in person, videoconference, or by phone.

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10. Submit secondary application to the University of Montana's Graduate School upon acceptance to AT program (<http://www.umt.edu/grad/apply/default.php>) (separate application fee from ATCAS)

## Skaggs School of Pharmacy

### Marketa Marvanova, Dean

The Skaggs School of Pharmacy, established in 1907 at Montana State College, was transferred to the University of Montana in 1913, and currently resides in the College of Health. The Skaggs School of Pharmacy has two departments: Pharmacy Practice and Biomedical and Pharmaceutical Sciences. The School offers professional and graduate degree programs including the entry-level doctor of pharmacy program which is fully accredited by the Accreditation Council for Pharmacy Education:

135 S. LaSalle Street, Suite 4100, Chicago IL 60603-4810,

Telephone: (312) 664-3575, or toll free at (800) 533-3606

Fax: (312) 664-4652

Accreditation Council for Pharmacy Education website

**Doctor of Pharmacy:** Students interested in clinical practice as a licensed pharmacist should explore this program. The curriculum offered by the Skaggs School of Pharmacy consists of a six-year program leading to the entry-level Doctor of Pharmacy (Pharm.D. ) degree. The first two years, or pre-professional portion of the curriculum, are spent in studies of the basic biological and physical sciences. The final four years are in the professional program, which is divided into three years of didactic coursework followed by a year of direct practice in patient care through experiential courses. During the first three years of the professional program, students devote their time to the study of the biomedical and pharmaceutical sciences and pharmacy practice. Areas of study include biochemistry, microbiology, medicinal chemistry, pharmaceuticals, pharmacology, social behavioral and administrative sciences, and therapeutics. The final professional year is entirely experiential and designed to fully prepare students to enter the profession as pharmacist patient care providers. The professional curriculum includes required and elective coursework. Students admitted to the Doctor of Pharmacy program also have the opportunity to pursue a dual degree (M.B.A., M.P.H., M.S. in Pharmaceutical Sciences) or a B.S. in Pharmaceutical Sciences degree. Post-graduate, residency, or fellowship training is encouraged as those with an advanced degree or residency training are in demand for research positions, specialty clinical practice, and clinical faculty positions.

To practice as a pharmacist, one must become a registered pharmacist. This requires graduating with a Pharm.D. degree from an accredited doctor of pharmacy professional program, completing practical experience under the direction of registered pharmacists, and passing both the NAPLEX and MPJE exams administered by the National Association of Boards of Pharmacy.

Career opportunities exist in the fields of community pharmacy, ambulatory care pharmacy, hospital and other institutional pharmacy, federal or state government service, public health agencies, and with the pharmaceutical industry. Those with advanced degrees or residency training are in demand for research positions, specialty clinical practice, and clinical faculty positions.

**Pre-professional Program:** The pre-pharmacy (pre-professional) curriculum, which requires a minimum of two years of full-time study, may be taken at any accredited college or university. Students at the University of Montana-Missoula may enter the pre-pharmacy program during any semester. It is recommended that students considering pharmacy as a major declare pre-pharmacy major as their major as early as possible to ensure appropriate advising. Upon designating pre-pharmacy as a major, students will be assigned an advisor from within the pharmacy school.

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**Professional Pharmacy Program:** Students must apply for admission to the professional program. Class size in the professional pharmacy program is restricted and admission to the program is competitive. For information on program requirements and the application procedure, refer to Prospective Students on the Pharmacy program website.

**B.S. in Pharmaceutical Sciences:** Students interested in research instead of clinical practice should consider the bachelor of science degree in pharmaceutical sciences. The four-year non-professional option in the BSPS program is intended for students with interests in research, pharmaceutical or biotechnical companies, or government agencies. A professional option for the degree is restricted to students already enrolled in the Doctor of Pharmacy program.

**High School Preparation:** In addition to the general University admission requirements, coursework in algebra, trigonometry, biology, chemistry, physics and computers/information technology are recommended for either the Pharm.D. or BSPS degree.

**Graduate Degrees in Pharmaceutical & Biomedical Sciences:** The School offers graduate degree programs in several areas of pharmaceutical and biomedical sciences. These are research-oriented degrees designed to prepare graduates to create new knowledge and medications for future use in patient care. Students interested in a research career should review the specific requirements for seeking a graduate degree. These graduate-level programs provide education and training in pharmacology, toxicology, medicinal chemistry, and molecular genetics. Program graduates are well prepared for careers in academia, government and industry.

**Graduate Programs:** Students interested in pursuing a graduate research degree should have completed a baccalaureate degree program. Students must apply to the graduate program. Information about the admission requirements and application process are posted on the Department of Biomedical and Pharmaceutical Sciences webpage.

## Department of Pharmacy Practice

### Vincent J. Colucci, Chair

The Department of Pharmacy Practice provides academic course work for the Doctor of Pharmacy degree, conducts research in the broad area of health care, and provides service to the profession of pharmacy and other health care disciplines.

## Department of Biomedical and Pharmaceutical Sciences

### Elizabeth A. Putnam, Chair

The Department of Biomedical and Pharmaceutical Sciences offers a curriculum in support of the Doctor of Pharmacy (Pharm.D.) degree and graduate programs in the biomedical and pharmaceutical sciences. Graduate degree programs include the M.S. and Ph.D. in:

- Medical Chemistry
- Pharmaceutical Sciences and Drug Design
- Toxicology

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# Pharmaceutical Sciences B.S.

## Bachelor of Science - Pharmaceutical Sciences

College of Health - Skaggs School of Pharmacy

**Degree Specific Credits:** 115

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

**Note:** The Skaggs School of Pharmacy offers two concentrations in the the B.S. in Pharmaceutical Sciences. This is the professional option that is restricted to students admitted to the Doctor of Pharmacy program. To be eligible for licensure as a pharmacist, students must obtain the Doctor of Pharmacy degree. See the Doctor of Pharmacy catalog page for more information.

For students seeking an undergraduate degree to prepare for research rather than clinical practice, please see the B.S. in Pharmaceutical Sciences (non-professional) concentration.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

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Lower-Division Core Courses	50
Biology	
General and Organic Chemistry	
Physics	
Mathematics	
Communication & Social Sciences	
Upper-Division Core Courses	65
Pharmaceutical & Biomedical Sciences	
Clinical Sciences	
Social, Behavioral, & Administrative Sciences	
Introductory Pharmacy Practice Experiences (IPPE)	
Total Hours	115

### Lower-Division Core Courses

#### Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 112	Human Form and Function I	3
BIOH 113	Human Form and Function II	3
BIOB 260	Cellular and Molecular Biology	4
Total Hours		10

Minimum Required Grade: C-

#### General and Organic Chemistry



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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223	Organic Chemistry II	3
Total Hours		18

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
Total Hours		5

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
M 162	Applied Calculus	4
<b>Complete one of the following courses:</b>		4
STAT 216	Introduction to Statistics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
Total Hours		8

Minimum Required Grade: C-

### Communication & Social Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
PSYX 100S	Intro to Psychology	3
or SOCI 101S	Introduction to Sociology	
ECNS 201S	Principles of Microeconomics	3
Total Hours		9

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Students must be admitted to the Doctor of Pharmacy degree program and complete all required coursework for the first two years including the first IPPE. Students enrolled in the professional pharmacy curriculum are assessed a supplemental fee. This fee does not apply to Pre-Pharmacy students. Refer to the fees section of the catalog for details.

In addition, students must demonstrate proficiency in pharmaceutical calculation by successfully completing a competency assessment prior to entering the second professional year.

### Pharmaceutical & Biomedical Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 329	Microbes & Medicines	4
PHAR 331	Pharmaceutics	4
PHAR 341 & PHAR 361	Pharmaceutical Pathophysiology I and Pharm Sci Lab I	5
PHAR 342 & PHAR 362	Pharmaceutical Pathophysiology II and Pharm Sci Lab II	5
PHAR 371	Integrated Studies I	1
PHAR 372	Integrated Studies II	1
PHAR 381	Pharmaceutical Biochemistry	4
PHAR 421	Medicinal Chem I	3
PHAR 422	Medicinal Chem II	3
PHAR 443	Pharmacol & Toxicol I	4
PHAR 444	Pharmacology & Toxicol II	4
Total Hours		38

Minimum Required Grade: C-

### Clinical Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 432	Clinical Pharmacokinetics	3
PHAR 451 & PHAR 471	Therapeutics I and Integrated Studies III	4
PHAR 452 & PHAR 472	Therapeutics II and Integrated Studies IV	4
Total Hours		11

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Minimum Required Grade: C-

## Social, Behavioral & Administrative Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 300 & PHAR 360	Pharmacy Practice I and Pharmacy Practice Lab I	5
PHAR 310	Pharmacy Practice II	2
PHAR 311	Healthy People	1
PHAR 350	Drug Info	1
PHAR 412 & PHAR 463	Pharmacy Practice III and Pharmaceutical Care Lab III	3
PHAR 460	Pharmaceutical Care Lab II	1
Total Hours		13

Minimum Required Grade: C-

## Introductory Pharmacy Practice Experiences (IPPE)

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 480	Community Pharmacy IPPE	3
Total Hours		3

Minimum Required Grade: C-

## Pharmaceutical Science B.S. - Non-Professional Concentration

### Bachelor of Science - Pharmaceutical Sciences - Non-Professional Concentration

College of Health - Skaggs School of Pharmacy

**Degree Specific Credits:** 91

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

**Note:** The Skaggs School of Pharmacy offers two concentrations in the B.S. in Pharmaceutical Sciences. This is the non-professional concentration that is open to all students whose primary career interests are in research and discovery, careers at pharmaceutical and biotechnology companies, and work in government institutions and agencies. This degree offers a broad pharmaceutical sciences background that will prepare students for work in disciplines critical to the discovery and development of new drugs and therapies as well as agencies regulating these disciplines. While it also meets pre-pharmacy requirements, it is not required for applying to the professional Doctor of Pharmacy program. Courses provided through the Doctor of Pharmacy program will have additional fees attached.

**Note:** Students enrolled in the Doctor of Pharmacy program who are interested in the B.S. in Pharmaceutical Sciences should look at the professional concentration in the B.S. in Pharmaceutical Sciences.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	50
Biology	
General and Organic Chemistry	
Physics	
Mathematics	
Communication & Social Sciences	
Upper-Division Core Courses	41
Total Hours	91

### Lower-Division Core Courses

#### Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 112	Human Form and Function I	3
BIOH 113	Human Form and Function II	3
BIOB 260	Cellular and Molecular Biology	4
Total Hours		10

Minimum Required Grade: C-

#### General and Organic Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223	Organic Chemistry II	3
Total Hours		18

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
Total Hours		5

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
M 162	Applied Calculus	4
<b>Complete one of the following courses:</b>		4
STAT 216	Introduction to Statistics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
Total Hours		8

Minimum Required Grade: C-

**Communication & Social Sciences**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
PSYX 100S	Intro to Psychology	3
or SOCI 101S	Introduction to Sociology	
ECNS 201S	Principles of Microeconomics	3
Total Hours		9

Minimum Required Grade: C-

**Upper-Division Core Courses**



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 305E	Ethics and Writing in Science	3
PHAR 329	Microbes & Medicines	4
PHAR 331	Pharmaceutics	4
PHAR 341	Pharmaceutical Pathophysiology I	4
PHAR 342	Pharmaceutical Pathophysiology II	4
PHAR 381	Pharmaceutical Biochemistry	4
PHAR 421	Medicinal Chemistry I	3
PHAR 422	Medicinal Chemistry II	3
PHAR 432	Clinical Pharmacokinetics	3
PHAR 443	Pharmacology & Toxicology I	4
PHAR 444	Pharmacology & Toxicology II	4
PHAR 494	Seminar	1
Total Hours		41

Minimum Required Grade: C-

# Doctor of Pharmacy

## Special Degree Requirements

Refer to graduation requirements listed previously in the catalog.

Degree candidates must:

1. Meet the general University requirements for graduation.
2. Earn a grade point average of 2.0 or higher in each of the following areas:
  1. all courses attempted at The University of Montana-Missoula (cumulative GPA).
  2. all courses which carry a pharmacy (PHAR) prefix (pharmacy GPA).
  3. all required courses in the professional pharmacy curriculum (professional GPA).
3. Required pharmacy course work must be completed with a grade of C- or better.
4. Complete at least six full academic years, including pre-pharmacy instruction, and a minimum of eight semesters of professional instruction as a full-time student registered for a minimum of twelve credits per semester.
5. Complete not less than 206 credits of course work with a minimum of 142 credits in the professional program.
6. Complete all other accreditation-required activities for pharmacy students (ACPE Standards 2016).

## Licensure in Montana

An applicant for licensure as a registered pharmacist in Montana must pass national examinations as required by the Montana State Board of Pharmacy. To qualify for the examinations, the applicant must be of good moral character and a graduate of an accredited school of pharmacy with a Doctor of Pharmacy degree; however, an applicant will not receive a license until all requirements have been met.

## Doctor of Pharmacy

### College of Health - Skaggs School of Pharmacy

**Degree Specific Credits:** 206 (64 Pre-pharmacy and 142 Professional credits)

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Pre-pharmacy coursework must be completed before entering the professional pharmacy program. Students should note some pre-pharmacy courses have prerequisites and they should consider that when planning their schedules. In addition, applicants to the professional pharmacy program must present proof

## University Of Montana

of having completed at least 20 hours of observation in a pharmacy, other health care or social field, a writing assignment about the experience, and one evaluation form from someone involved with the applicant in such an experience. The Pharmacy College Admission Test (PCAT) must be taken within two years of application. Applications for the professional program are submitted through the PharmCAS system. See the School's prospective student webpage for more information.

## Summary

Pre-Pharmacy Requirements	64
Biology	
General and Organic Chemistry	
Physics	
Mathematics	
Communication & Social Sciences	
Pre-Pharmacy Electives	
Professional Pharmacy Curriculum	142
Pharmaceutical & Biomedical Sciences	
Clinical Sciences	
Social Behavioral & Administrative Sciences	
Introductory & Advanced Pharmacy Practice Experiences (IPPE & APPE)	
Total Hours	206

## Pre-Pharmacy Requirements

### Biology

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 112	Human Form and Function I	3
BIOH 113	Human Form and Function II	3
BIOB 260	Cellular and Molecular Biology	4
Total Hours		10

Minimum Required Grade: C-

**General and Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223	Organic Chemistry II	3
Total Hours		18

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
Total Hours		5

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
M 162	Applied Calculus	4
<b>Complete one of the following courses:</b>		4
STAT 216	Introduction to Statistics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
Total Hours		8

Minimum Required Grade: C-

#### Communication & Social Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
PSYX 100S	Intro to Psychology	3
or SOCI 101S	Introduction to Sociology	
ECNS 201S	Principles of Microeconomics	3
WRIT 101	College Writing I	3
Total Hours		12

Minimum Required Grade: C-

#### Pre-Pharmacy Electives

CODE	TITLE	HOURS
<b>Complete 11 elective credits. Speak with your advisor about completing this requirement.</b>		11
Total Hours		11

Minimum Required Grade: C-

## Professional Pharmacy Curriculum

Students must apply for admission to the professional program. Students enrolled in the professional pharmacy curriculum are assessed a supplemental fee. This fee does not apply to pre-pharmacy students. Refer to the fees section of this catalog for details.

Students must demonstrate proficiency in pharmaceutical calculation by successfully completing a competency assessment prior to entering the second professional year.

### Pharmaceutical & Biomedical Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 329	Microbes & Medicines	4
PHAR 331	Pharmaceutics	4
PHAR 341 & PHAR 361	Pharmaceutical Pathophysiology I and Pharm Sci Lab I	5
PHAR 342 & PHAR 362	Pharmaceutical Pathophysiology II and Pharm Sci Lab II	5
PHAR 371	Integrated Studies I	1
PHAR 372	Integrated Studies II	1
PHAR 381	Pharmaceutical Biochemistry	4
PHAR 421	Medicinal Chem I	3
PHAR 422	Medicinal Chem II	3
PHAR 443	Pharmacol & Toxicol I	4
PHAR 444	Pharmacology & Toxicol II	4
Total Hours		38

Minimum Required Grade: C-

### Clinical Sciences

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 432	Clinical Pharmacokinetics	3
PHAR 451 & PHAR 471	Therapeutics I and Integrated Studies III	4
PHAR 452 & PHAR 472	Therapeutics II and Integrated Studies IV	4
PHAR 553 & PHAR 571	Therapeutics III and Integrated Studies V	5
PHAR 554 & PHAR 563 & PHAR 572	Therapeutics IV and Pharmaceutical Care Lab V and Integrated Studies VI	6
PHAR 565	Pharmacy APPE Preparation	3
Total Hours		25

Minimum Required Grade: C-

**Social, Behavioral & Administrative Sciences**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 300 & PHAR 360	Pharmacy Practice I and Pharmacy Practice Lab I	5
PHAR 310	Pharmacy Practice II	2
PHAR 311	Healthy People	1
PHAR 350	Drug Info	1
PHAR 412 & PHAR 463	Pharmacy Practice III and Pharmaceutical Care Lab III	3
PHAR 460	Pharmaceutical Care Lab II	1
PHAR 505 & PHAR 560	Pharmacy Practice IV and Pharmaceutical Care Lab IV	4
PHAR 506	Pharmacy Practice V	3
PHAR 514E	Case Studies Pharm Ethics	3
PHAR 550	Drug Literature Eval	3
PHAR 559	Public Health and Pharmacoeconomics	3
3 credits of elective courses. Please see your advisor for courses that will complete this requirement.		3
Total Hours		32

Minimum Required Grade: C-

**Introductory and Advanced Pharmacy Practice Experiences (IPPE and APPE)**



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 480	Community Pharmacy IPPE	3
PHAR 481	Hospital Pharmacy IPPE	3
PHAR 579	Comm Pharm APPE	6
PHAR 580	Hosp Pharm APPE	6
PHAR 581	Inpatient APPE	6
PHAR 582	AMB Care APPE	6
<b>Complete 18 credits of the following courses:</b>		18
PHAR 583	Drug Information APPE	
PHAR 584	Specialized Services APPE	
PHAR 585	Geriatric APPE	
PHAR 586	Clinical Speciality APPE	
PHAR 587	Administrative APPE	
PHAR 588	Research APPE	
PHAR 589	Education APPE	
Total Hours		48

Minimum Required Grade: C-

## School of Physical Therapy and Rehabilitation Science

### Richard Willy, Chair

The professional program in physical therapy grants the Doctor of Physical Therapy (DPT) degree. The program has an entry-level DPT program, an entry-level DPT/MBA program, an entry-level DPT/MPH, and a post-entry level transitional DPT curriculum leading to the DPT degree. The following section describes the profession and the pre-professional requirements and application procedures. This information also is available on the program website.

### The Profession

Physical Therapy is a health care profession concerned with the habilitation and rehabilitation of individuals with limitations resulting from pathological, surgical, or traumatic conditions. The profession is also concerned with health, wellness and prevention of disability in an effort to promote maximal use of an individual's capacities and reduce their risk of illness. Physical therapists are trained to evaluate neurological, musculoskeletal, cardiovascular, respiratory, and integumentary disorders. Exercise and physical agents, such as heat, cold, light, electricity, and massage are used to promote healing, relieve pain, maintain or restore strength, and improve joint range of motion and functional capabilities. Physical therapists play key roles in:

1. the physical therapy diagnosis and treatment of musculoskeletal injuries,
2. wellness and injury prevention,
3. rehabilitating injured workers to return to their jobs,
4. rehabilitating senior citizens after debilitating disease to enable them to remain independent,
5. helping handicapped children to live within the least restrictive environment,
6. preventing and treating sports-related injuries, and
7. conducting research in basic and clinical sciences.

Knowledge of the psychological and social ramifications of disability affecting the individual and his or her family is an integral part of physical therapy intervention.

Physical therapy is practiced in diverse settings, including hospitals, clinics, skilled nursing facilities, sports medicine programs, public schools, and private practices. Legislation in Montana permits direct public access to physical therapists for evaluation and treatment without a physician referral. Even so, physical therapists remain committed to functioning as an integral member of the health care team.

The physical therapy educational program at the University of Montana seeks to prepare physical therapists who have a broad base of skills upon graduation, and who will be able to implement physical therapy services in many settings, especially rural environments. Rural settings require a physical therapist to serve not only as a provider of direct patient care, but also to fulfill the roles of administrator, supervisor, teacher, consultant, and researcher. Students successfully completing the professional program meet the competencies for physical therapy as determined by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, receive a Doctor of Physical Therapy degree, and are prepared for state licensure.

## University Of Montana

The Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association through 2018.

### **High School Preparation**

Specific high school courses are not required but a background is recommended in mathematics, chemistry, biology, physics, English, and communication skills.

### **Pre-Professional Physical Therapy Curriculum and Application Process**

Students wishing to apply to the professional physical therapy program at the University of Montana-Missoula may select any major for their undergraduate degree. While pre-physical therapy is not a degree-granting major at the University, prospective applicants should list pre-professional physical therapy (PPPT) as their second major. This will allow them also to receive advising from the School of Physical Therapy and Rehabilitation Science in order to assure adequate preparation for the professional program. In addition to completing a baccalaureate degree, applicants must take the prerequisite courses and meet additional application requirements listed on our website. All prerequisite courses must be taken for a traditional letter grade and must be completed with a grade of "C" (2.00) or better.

## School of Public and Community Health Sciences

### Tony Ward, Chair

Located in Missoula, Montana, the University of Montana (UM), School of Public and Community Health Sciences (SPCHS) is housed within the College of Health (CoH). The Montana Board of Regents approved the SPCHS administrative unit in March 2005, with its first class of students enrolled during the Fall 2006. We are also the first and only Council on Education for Public Health (CEPH) accredited program in our state.

At the graduate level, the SPCHS affords students eight program opportunities: a PhD in Public Health program, an online Master of Public Health program, a Master of Public Health with a Community Health and Prevention Sciences program and five graduate-level certificate programs (Public Health, Epidemiology, Global Health, Environmental Health Sciences, and Public Health Administration). We also offer a Bachelor of Science in Public Health which began in Fall 2020, as well as a 2+2 program with Salish Kootenai College.

### What is public health?

Public health practitioners work to solve the world's most pressing health problems, such as COVID-19 and climate change. They focus on preventing disease by promoting a healthier lifestyle, implementing educational programs, developing policies, administering services, conducting research, and regulating health systems as a way to achieve these goals.

- What does public health encompass?
  - Public health practitioners work to improve the health of individuals and communities both locally and globally. They confront health issues such as controlling infectious disease and reducing environmental hazards. They also work to develop applications in prevention programs to improve health.
- What impact does public health have on our lives?
  - Public health impacts our lives by creating healthier communities, reducing the impact of natural disasters and global epidemics, and addressing health disparities.
- What types of careers are available in the field of public health?
  - Public Health encompass a wide variety of careers related to epidemiology, biostatistics, environmental health, health administration, community health, and preparedness or preventive medicine.

For more information about the School of Public and Community Health Sciences, including contact information for faculty members, please visit the School of Public and Community Health Sciences website.

## Public Health B.S. - General Public Health

### Bachelor of Science - Public Health; General Public Health Concentration

College of Health

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Public Health Core Courses	21
General Public Health Concentration	39
Total Hours	

### Public Health Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 101S	Introduction to Public Health	3
PUBH 225	Public Health Policy	3
PUBH 325	Environmental and Occupational Health	3
CHTH 355	Theory and Practice of Community Health Education	3
CHTH 440	Principles of Epidemiology	3
PUBH 475E	Issues in Medical and Public Health Ethics	3
PUBH 498 or PUBH 499	Internship or Senior Capstone	3
Total Hours		21

Minimum Required Grade: C-

## General Public Health Concentration

**Rule:** Complete each of the following sub-groups. 39 total credits required.

### Global Health

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
CHTH 414	Health and Culture	
PUBH 155	Reimagining Global Health	
Total Hours		3

Minimum Required Grade: C-

### Community Health

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
CHTH 445	Program Planning in Community Health	
CHTH 485	Theories of Health Behaviors and Counseling	
HTH 370	Peer Health Education	
HTH 430	Health and Mind/Body/Spirit	
Total Hours		3

Minimum Required Grade: C-

**Population Health**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
PUBH 230	Public Health Biology	
PUBH 330	Public Health Informatics	
PUBH 345	System & Organizations	
PUBH 365	Population Health Practices	
PUBH 410	Population Health Planning	
Total Hours		3

Minimum Required Grade: C-

**Additional Required Credits**

Note: Courses taken to complete the Global Health, Community Health, and Population Health requirements do not count towards these additional credits.

CODE	TITLE	HOURS
<b>Complete 6 additional credits of the following courses:</b>		6
BIOH 112	Human Form and Function I	
BIOH 113	Human Form and Function II	
CHTH 414	Health and Culture	
CHTH 445	Program Planning in Community Health	
CHTH 485	Theories of Health Behaviors and Counseling	
HIT 101	Intro to Healthcare Informatics	
HTH 370	Peer Health Education	
HTH 395	Peer Health Practicum	
HTH 430	Health and Mind/Body/Spirit	
PUBH 155	Reimagining Global Health	
PUBH 345	System & Organizations	
PUBH 365	Population Health Practices	
PUBH 410	Population Health Planning	
Total Hours		6

Minimum Required Grade: C-

### General Public Health Electives

Note: Courses taken to complete the Global Health, Community Health, and Population Health, and additional credit requirements do not count towards these elective credits.

CODE	TITLE	HOURS
<b>Complete 24 credits of the following courses:</b>		24
AHHS 430	Health Aspects of Aging	
ANTY 126	Anthropology and Global Health	
ANTY 220S	Culture & Society	



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ANTY 330X	Peoples and Cultures of World	
ANTY 333	Culture and Population	
ANTY 349	Social Change	
ANTY 426	Culture, Health and Healing	
CHTH 414	Health and Culture	
COMX 425	Comm in Health Organizations	
ECNS 310	Intro to Health Economics	
ENST 225S	Sustainable Communities	
GPHY 468	Community & Regional Analysis	
GPHY 469	Planning & Analysis Laboratory	
IDS 497	Monitoring and Evaluation	
KIN 201	Basic Exercise Prescription	
NPAD 466	Nonprofit Administration & Public Service	
NPAD 467	Advanced Nonprofit Admin	
PHAR 320	Am Ind Health Issues	
PHL 321E	Philosophy & Biomedical Ethics	
PUBH 155	Reimagining Global Health	
PUBH 230	Public Health Biology	
PUBH 380	Public Health Nutrition	
PSCI 431	Politics of Global Migration	
PSCI 463	Development Administration	
SOCI 355	Population and Society	
S_W 423	Addiction Studies	
Total Hours		24

Minimum Required Grade: C-

## Public Health B.S. - Community Health

### Bachelor of Science - Public Health; Community Health Concentration

College of Health

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Public Health Core Courses	21
Community Health Concentration	39
Total Hours	60

### Public Health Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 101S	Introduction to Public Health	3
PUBH 225	Public Health Policy	3
PUBH 325	Environmental and Occupational Health	3
CHTH 355	Theory and Practice of Community Health Education	3
CHTH 440	Principles of Epidemiology	3
PUBH 475E	Issues in Medical and Public Health Ethics	3
PUBH 498	Internship	3
Total Hours		21

Minimum Required Grade: C-

## Community Health Concentration

### Community Health Concentration Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHTH 445	Program Planning in Community Health	4
CHTH 485	Theories of Health Behavior and Counseling	3
HTH 370	Peer Health Education	3
HTH 395	Peer Health Practicum	1
PUBH 380	Public Health Nutrition	3
Total Hours		14

Minimum Required Grade: C-

### Community Health Electives

	TITLE	HOURS

<b>Complete 25 credits of the following courses:</b>		25
AHHS 430	Health Aspects of Aging	
ANTY 220S	Culture & Society	
ANTY 426	Culture, Health and Healing	
BIOH 112	Human Form and Function I	
BIOH 113	Human Form and Function II	
BIOM 227	Vectors and Parasites	
BIOM 250N	Microbiology for Hlth Sciences	
CHTH 414	Health and Culture	
COMX 425	Comm in Health Organizations	
ENST 225S	Sustainable Communities	
HIT 101	Intro to Healthcare Informatics	
HIT 265	Electronic Health Records	
HTH 110	Personal Health and Wellness	
HTH 395	Peer Health Practicum	
HTH 430	Health and Mind/Body/Spirit	
IDS 497 (Section 1)	Monitoring and Evaluation	
KIN 201	Basic Exercise Prescription	
NPAD 466	Pract Apps in NPAD	
NPAD 467	Advanced Nonprofit Admin	
PSCI 377	Global Health Issues	
PUBH 155	Reimagining Global Health	
PUBH 230	Public Health Biology	
PUBH 345	System & Organizations	

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PUBH 365	Population Health Practices	
PUBH 410	Population Health Planning	
S_W 423	Addiction Studies	
S_W 455	Social Gerontology	
Total Hours		25

Minimum Required Grade: C-

## Public Health B.S. - Population Health

### Bachelor of Science - Public Health; Population Health Concentration

College of Health

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Public Health Core Courses	21
Population Health Concentration	39
Total Hours	60

### Public Health Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 101S	Introduction to Public Health	3
PUBH 225	Public Health Policy	3
PUBH 325	Environmental and Occupational Health	3
CHTH 355	Theory and Practice of Community Health Education	3
CHTH 440	Principles of Epidemiology	3
PUBH 475E	Issues in Medical and Public Health Ethics	3
PUBH 498 or PUBH 499	Internship or Senior Capstone	3
Total Hours		21

Minimum Required Grade: C-

## Population Health Concentration

### Population Health Concentration Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 230	Population Health Biology	3
PUBH 330	Public Health Informatics and Data Systems	3
PUBH 345	Healthcare Systems and Organizations	3
PUBH 365	Population Health Evidence-Based Practices	3
PUBH 410	Population Health Planning and Management	3
Total Hours		15

Minimum Required Grade: C-

### Population Health Electives

	TITLE	HOURS

University Of Montana

<b>Complete 24 credits of the following courses:</b>		<b>24</b>
BIOH 441	CNS Diseases	
BIOH 462	Principles Medical Physiology	
BIOM 227	Vectors and Parasites	
BIOM 250N	Microbiology for Hlth Sciences	
BIOM 407	Clinical Diagnosis	
BIOM 408	Clinical Diagnosis Lab	
BMIS 326	Introduction to Data Analytics	
CHTH 414	Health and Culture	
COMX 485	Interaction and Well-being	
ECNS 310	Intro to Health Economics	
HIT 265	Electronic Health Records	
HTH 110	Personal Health and Wellness	
PHL 321E	Philosophy and Biomedical Ethics	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Global Health Issues	
PUBH 155	Reimagining Global Health	
SOCI 346	Rural Sociology	
SOCI 350	The Community	
SOCI 355	Population and Society	
STAT 216	Introduction to Statistics	
S_W 300	Human Behavior and the Social Environment	
S_W 455	Social Gerontology	
Total Hours		<b>24</b>

Minimum Required Grade: C-



## Public Health B.S. - Global Health

### Bachelor of Science - Public Health; Global Health Concentration

College of Health

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Public Health Core Courses	21
Global Health Concentration	39
Total Hours	

### Public Health Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 101S	Introduction to Public Health	3
PUBH 225	Public Health Policy	3
PUBH 325	Environmental and Occupational Health	3
CHTH 355	Theory and Practice of Community Health Education	3
CHTH 440	Principles of Epidemiology	3
PUBH 475E	Issues in Medical and Public Health Ethics	3
PUBH 498 or PUBH 499	Internship or Senior Capstone	3
Total Hours		21

Minimum Required Grade: C-

## Global Health Concentration

### Global Health Concentration Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 220S	Culture and Society	3
CHTH 414	Health and Culture	3
IDS 497	Monitoring and Evaluation	3
IDS 497	Social and Behavioral Change Communication	3
PUBH 155	Reimagining Global Health: Biosocial Perspectives	3
Total Hours		15

Minimum Required Grade: C-

### Global Health Electives

CODE	TITLE	HOURS
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<b>Complete 24 credits of the following courses:</b>		<b>24</b>
AHHS 430	Health Aspects of Aging	
ANTY 126	Anthropology and Global Health	
ANTY 330X	Peoples and Cultures of World	
ANTY 333	Culture and Population	
ANTY 349	Social Change	
ANTY 426	Culture, Health and Healing	
CHTH 445	Prgrm Plan in Comm Health	
COMX 425	Comm in Health Organizations	
ECNS 310	Intro to Health Economics	
ENST 225S	Sustainable Communities	
GPHY 468	Community & Regional Analysis	
GPHY 469	Planning & Analysis Laboratory	
KIN 201	Basic Exercise Prescription	
NPAD 466	Nonprofit Administration & Public Service	
NPAD 467	Advanced Nonprofit Admin	
PHAR 320	Am Ind Health Issues	
PHL 321E	Philosophy & Biomedical Ethics	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 431	Politics of Global Migration	
PSCI 463	Development Administration	
PUBH 380	Public Health Nutrition	
SOCI 346	Rural Sociology	
SOCI 350	The Community	

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SOCI 355	Population and Society	
S_W 423	Addiction Studies	
Total Hours		24

Minimum Required Grade: C-

## Health Behavior Coaching Certificate

Admission requirements for the Certificate Program in Health Behavior Coaching include:

1. Sophomore level or higher standing;
2. 3.0 GPA;
3. letter of intent.

## Post-Secondary Certificate - Health Behavior Coaching

### College of Health

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Note:** In addition to the courses listed below, students must complete or have completed a bachelor's degree from an accredited university.

### Summary

Core Courses	12
Total Hours	12

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PUBH 410	Population Health Planning	3
PUBH 420	Health Coach Training	3
PUBH 494	Health Coach Seminar	4
PUBH 495	Health Coach Practicum	2
Total Hours		12

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Minimum Required Grade: B-

## School of Social Work

### James Caringi, Chair

Social work is a human service profession concerned with the prevention of social problems, the maintenance of satisfying social relationships and the enhancement of human development. It focuses on people and their social environment. Social workers employ a range of knowledge and skills as the basis for constructive intervention on behalf of various client populations. The Bachelor of Arts and Master of Social Work degrees are offered. The Bachelor of Arts degree prepares graduates for generalist social work practice. The Master of Social Work degree prepares graduates for advanced integrated practice.

The undergraduate major in social work is available for those who wish to prepare for:

1. professional employment in the social services;
2. entry into a graduate school of social work;
3. graduate education in other helping service professions.

The graduate degree in social work prepares graduates for advanced social work practice. Students can enroll in a two year full-time program or in a part-time option. See the University of Montana Graduate Catalog for a description of the Master of Social Work program. Both the Bachelor of Arts degree and the Master of Social Work degree are fully accredited by the Council on Social Work Education.

## Undergraduate

- Social Work B.A.

## Undergraduate Minors

- Gerontology

## Social Work B.A.

### Bachelor of Arts - Social Work

#### College of Health

**Degree Specific Credits:** 62

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** A minimum of 41 social work credits are required for this degree. No more than 60 social work credits will count toward graduation. Admission into the School of Social Work requires a 2.75 overall GPA, a 3.00 in Social Work courses and completion of 4 of 7 extra departmental courses.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core Courses	27
Social Science Requirements	
Economics Requirement	
Biological Requirement	
Upper-Division Core Courses	35
Total Hours	62

#### Lower-Division Core Courses

##### Social Science Requirements



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSYX 100S	Intro to Psychology	3
PSYX 230	Developmental Psychology	3
PSYX 233	Fund of Psychology of Aging	3
S W 100S	Intro Soc Welfare	3
S W 200	Intro Soc Wrk Pract	3
SOCI 101S	Introduction to Sociology	3
Total Hours		21

Minimum Required Grade: C-

**Economics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ECNS 101S	Economic Way of Thinking	
ECNS 201S	Principles of Microeconomics	
Total Hours		3

Minimum Required Grade: C-

**Biological Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 101N	Discover Biology	
PSYX 250N	Fund of Biological Psychology	
Total Hours		3

Minimum Required Grade: C-

**Upper-Division Core Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
S W 300	Hum Behav & Soc Environ	3
S W 310	S W Policy & Services	3
S W 350	S W Interven Meth I	3
S W 360	S W Interven Meth II	3
S W 400	Social Work Research	3
S W 410E	Social Work Ethics	3
S W 464	Cultural Humility in Social Work Practice: Valuing Diversity	3
S W 487	Advanced Practice I	2
S W 488	Advanced Practice II	2
S W 495	Field Work Practicum (2 semesters)	10
Total Hours		35

Minimum Required Grade: C-

## Gerontology Minor

Students in the Gerontology Minor program will study issues of aging from an interdisciplinary perspective and come to understand the interplay between them, including the health and medical as well as social and psychological needs of older persons. Although this interdisciplinary minor is housed in the School of Social Work, students in other majors may complete the minor in consultation with both the Chair of the Gerontology Minor and the students academic advisors in their respective departments. Students must consult with their major advisor to select electives, practicum or volunteer experiences, and to integrate courses that will meet the requirements of the minor.

### Minor - Gerontology

#### College of Health

**Degree Specific Credits:** 21-23

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Core Courses	12
Integrating Courses	3
Practicum Courses	3-5
Gerontology Electives	3
Total Hours	21-23

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### Core Courses

**Note:**These courses provide students with a common knowledge base through an introduction to gerontology and study of three core areas: social aspects, psychological aspects, and health aspects of aging.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHHS 325	Introduction to Gerontology	3
AHHS 430	Health Aspects of Aging	3
PSYX 233	Fund of Psychology of Aging	3
S W 455	Social Gerontology	3
Total Hours		12

Minimum Required Grade: C-

## Integrating Courses

**Notes:** In each of the following majors, a course has been identified that will integrate the core course content with information and concepts within the major. A similar course will be identified in other majors not listed here.

Nursing students can also take NRS 377 through Montana State University with approval by advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSD 365	Acquired Communication and Swallowing Disorders (for Communication Sciences & Disorders majors)	
KIN 483	Exercise Disease & Aging (for Health and Human Performance majors)	
PHAR 451	Therapeutics I (for Pharmacy majors)	
P T 520	Development Through the Life Span (for Physical Therapy majors)	
SOCI 332	Sociology of the Family (for Psychology, Sociology, and Women's and Gender Studies majors)	
S W 300	Hum Behav & Soc Environ (for Social Work majors)	
Total Hours		3

# University Of Montana

Minimum Required Grade: C-

## Practicum Courses

### Notes:

- The courses provide experience working with both well and/or frail older persons.
- Nursing students can also take NRS 454 through Montana State University with approval by advisor.
- Students in majors that do not have access to a practicum course can enroll in AHHS 395 for up to 3 credits of service learning experience compatible with the student's major and interests.

CODE	TITLE	HOURS
<b>Complete at least 3 credits from the following courses:</b>		3-5
AHHS 395	Geriatric Practicum (for Communicative Sciences & Disorders majors)	
KIN 498	Internship (for Health & Human Performance majors)	
PHAR 585	Geriatric APPE (for Pharmacy majors)	
P T 583 & P T 584	Integrated Clinical Experience I and Integrated Clinical Experience II ( for Physical Therapy majors)	
PSYX 398	Internship (for Psychology majors)	
or PSYX 298	Internship	
S W 398	Internship (for Social Work majors)	
or S W 495	Field Work Practicum	
SOCI 498	Internship (for Sociology majors)	
WGSS 398	Coop Education/Internship (for Women s & Gender Studies majors)	
Total Hours		3-5

Minimum Required Grade: C-

## Gerontology Electives

**Note:** A student must take a minimum of 3 elective credits with at least 25% of the content focused on gerontology. Students may petition for approval of another elective course.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
AHHS 327	MGS Meeting	
AHHS 420	Geriatric Health Issues	
AHHS 491	Special Topics (Geriatric Healthcare)	
AHMS 270E	Medical Ethics	
ANTY 426	Culture, Health and Healing	
COMX 485	Interaction and Well-being	
PHAR 320	Am Ind Health Issues	
PHL 321E	Philosophy & Biomedical Ethics	
PSYX 280	Fund of Memory and Cognition	
PSYX 348	Psychology of Family Violence	
S W 475	Death, Dying and Grief	
SOCI 332	Sociology of the Family	
SOCI 491	Special Topics (Sociology of Health & Illness)	
Total Hours		3

Minimum Required Grade: C-

# School of Speech, Language, Hearing, and Occupational Sciences

## **Julie Wolter, Chair**

The Bachelor of Arts Degree in Communicative Sciences and Disorders prepares students for graduate study in speech-language pathology, audiology, various education specialties, business, and health care as well as such fields as developmental and cognitive psychology. The Master of Science degree in Speech Language Pathology provides students with the foundational knowledge and clinical skills in the field of speech language pathology to work in medical and educational settings with clients across the life span.

## Undergraduate Degree

- Communicative Sciences and Disorders B.A.

## Undergraduate Minor

- Communicative Sciences and Disorders Minor

## Undergraduate Certificate

- Speech Language Pathology/Audiology Assistant Certificate
- Communicative Sciences and Disorders Leveling Certificate

# Communicative Sciences and Disorders B.A.

## Bachelor of Arts - Communicative Sciences & Disorders

College of Health

**Degree Specific Credits:** 64-68

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core Courses	23
Upper-Division Core Courses	21
Degree Electives	20-24
Biological Science Requirement	
Physical Science Requirement	
Statistics Requirement	
Psychology Requirement	
Modern and Classical Language Requirement	
Total Hours	64-68

### Lower-Division Core Courses



## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSD 110	Introduction to Speech, Language, and Audiology	3
CSD 205	Clinical Application & Observations in SLP & Audiology	2
CSD 210	Speech & Lang Development	3
CSD 222	Intro to Audiology	3
CSD 265	Developmental Speech and Language Disorders and Treatment	3
LING 270S	Intro to Linguistics	3
PSYX 100S	Intro to Psychology	3
PSYX 120	Introduction to Psychological Research Methods	3
Total Hours		23

Minimum Required Grade: C-

## Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSD 320	Phonological Disorders & Phonetics	3
CSD 330	Anatomy & Physiology of the Speech & Swallowing Mechanism	3
CSD 331	Neurological Bases of Communication & Swallowing Disorders	3
CSD 365	Acquired Communication & Swallowing Disorders	3
CSD 420	Speech and Hearing Science	3
CSD 430	Senior Capstone	3
CSD 450	Aural (Ear) Rehabilitation	3
Total Hours		21

Minimum Required Grade: C-

## Degree Electives

**Rule:** Complete the following subcategories.

### Biological Science Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
BIOB 101N	Discover Biology	
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	
Total Hours		3-4

Minimum Required Grade: C-

### Physical Science Requirement

**Note:** Student may take another physical science course with the approval of the department.

CODE	TITLE	HOURS
<b>Complete one chemistry or physics course, which must be a minimum of 3 credits.</b>		3
Total Hours		3

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

### Psychology Requirement

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
PSYX 230	Developmental Psychology	3
or PSYX 233	Fund of Psychology of Aging	
Total Hours		3

Minimum Required Grade: C-

**Modern and Classical Language Requirement**

CODE	TITLE	HOURS
<b>Compete the University of Montana general education Modern and Classical Language requirement.</b>		4-8
Total Hours		4-8

Minimum Required Grade: C-

# Communicative Sciences and Disorders Minor

## Minor - Communicative Sciences & Disorders

College of Health

**Degree Specific Credits: 18**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Core Courses	12
Minor Electives	6

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSD 110	The Field of CSD	3
CSD 210	Speech & Lang Devel	3
CSD 222	Intro to Audiology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Minor Electives

University Of Montana

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
CSD 320	Phono Devel & Phonetics	
CSD 365	Acquired Communication and Swallowing Disorders	
CSD 460	Language Assessment and Intervention for Children Birth to Preschool	
CSD 466	Acq Cogn Comm Disorders	
Total Hours		6

Minimum Required Grade: C-

# Speech Language Pathology Assistant Certificate

## Post-Secondary Certificate - Speech Language Pathology Assistant

College of Health

**Degree Specific Credits:** 26

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

### Summary

Lower-Division Courses	17
Upper-Division Courses	9
Total Hours	26

### Lower-Division Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSD 110	Introduction to Speech, Language, and Audiology	3
CSD 205	Clinical Application and Observations in Speech-Language Pathology and Audiology	2
CSD 210	Speech & Lang Development	3
CSD 222	Intro to Audiology	3
CSD 261	Introduction to Speech-Language Pathology Assistant	3
CSD 265	Developmental Speech and Language Disorders and Treatment	3
Total Hours		17

Minimum Required Grade: C-

**Upper-Division Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CSD 320	Phonological Disorders & Phonetics	3
CSD 330	Anatomy & Physiology of the Speech & Swallowing Mechanism	3
CSD 365	Acquired Communication and Swallowing Disorders	3
Total Hours		9

Minimum Required Grade: C-

# Communicative Sciences and Disorders Leveling Certificate

## Post-Secondary Certificate - Communicative Sciences and Disorders Leveling

College of Health

**Degree Specific Credits:** 29

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Required Courses	29
Total Hours	29

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### Required Courses



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CSD 205	Clinical Application and Observations in Speech-Language Pathology and Audiology	2
CSD 210	Speech & Lang Development	3
CSD 222	Intro to Audiology	3
CSD 265	Developmental Speech and Language Disorders and Treatment	3
CSD 320	Phonological Disorders & Phonetics	3
CSD 330	Anatomy & Physiology of the Speech & Swallowing Mechanism	3
CSD 331	Neurological Bases of Communication and Swallowing Disorders	3
CSD 365	Acquired Communication and Swallowing Disorders	3
CSD 420	Speech and Hearing Science	3
CSD 450	Aural (Ear) Rehabilitation	3
Total Hours		29

Minimum Required Grade: C-

## Health Sciences < University of Montana

### Health Sciences

Health science courses are concerned with fundamental issues in human health and disease and are, therefore, interdisciplinary in both scope and content. They have been designed not only for students anticipating careers in medicine, dentistry, nursing, public health, pharmacy, social work, medical technology, physical therapy, cytotechnology, and numerous other health care professions and services, but for all students interested in individual and community health, the clinical and paramedical arts, and the biomedical sciences. Health sciences courses are listed under two designations:

1. Allied Health: Health Sciences;
2. other disciplines.

### Health Sciences Courses

#### Allied Health: Health Sciences

CODE	TITLE	HOURS
AHHS 191	Special Topics	1-6
AHHS 291	Special Topics	1-6
AHHS 325	Introduction to Gerontology	3
AHHS 327	MGS Meeting	1
AHHS 389	Rec Adv in Clin Med	1
AHHS 390	Research	1-4
AHHS 391	Special topics	1-12
AHHS 394	Medical Preparation	2
AHHS 395	Geriatric Practicum	1-3
AHHS 420	Geriatric Health Issues	3
AHHS 430	Health Aspects of Aging	3
AHHS 490	Research	1-4
AHHS 491	Special Topics	1-12

Course List

## Anthropology

CODE	TITLE	HOURS
ANTY 211N	Anthropological Genetics	3
ANTY 333	Culture and Population	3
ANTY 426	Culture, Health and Healing	3

[Course List](#)

## Economics

CODE	TITLE	HOURS
ECNS 310	Intro Health Economics	3

[Course List](#)

## Health and Human Performance

CODE	TITLE	HOURS
NUTR 221N	Basic Human Nutrition	3

[Course List](#)

## Microbiology

CODE	TITLE	HOURS
BIOM 250N	Microbiology for Hlth Sciences	3
BIOM 251	Microbiology Hlth Sciences Lab	1

[Course List](#)

## Social Work

CODE	TITLE	HOURS
S W 423	Addiction Studies	3
S W 455	Social Gerontology	3

[Course List](#)

## Pharmacy

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
PHAR 110N	Use & Abuse of Drugs	3
PHAR 320	Am Ind Health Issues	3

Course List

## Philosophy

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
PHL 321E	Philosophy & Biomedical Ethics	3

Course List

## Pre-Medical Sciences < University of Montana

### Pre-Medical Sciences

**Mark A. Pershouse, Director and Associate Professor**

Health care continues to be one of the most rapidly expanding areas of our society. Careers in the health professions have expanded both in numbers and in the variety of opportunities. The rewards of a career in health care include excellent salaries, stability of employment, geographic mobility, and the opportunity to help other people. The Pre-Medical Sciences Program is an inclusive, non-judgmental advising program that helps students become well-informed, well-prepared applicants to programs in allopathic medicine, osteopathic medicine, chiropractic medicine, dentistry, naturopathic medicine, optometry, physician assistant studies, podiatry, and veterinary medicine.

Pre-Medical Sciences is not a major at the University of Montana. The Pre-Medical coursework will help students to gain admission to a professional school or program while completing a degree in a field of study. Students may select any major as a field of study, but specific pre-professional courses must be completed. When selecting a major, remember that a science major is not required for admissions into professional schools. It is more important to perform well in your chosen major. Professional schools are most concerned with the overall quality, scope, and difficulty of undergraduate work rather than the major.

Pre-professional courses are designed to provide a strong foundation in the sciences, highly developed communication skills, and a solid background in the social sciences and humanities. Curriculum guides outlining minimal course requirements established by professional schools are available from the Pre-medical Sciences office and from the Pre-Medical Sciences website (<http://umt.edu/premed>). Because many majors within the sciences, social sciences, and humanities can provide strong preparation for medical school, the Pre-Medical Sciences Advising Program gives students the opportunity to interact with advisors from diverse disciplines in addition to their advisor for their major.

The minimal requirements for professional school should be completed prior to graduation and prior to taking the admission test required by professional schools. Since specific subject requirements vary among institutions, students should discuss their academic plans with their Pre-Medical Sciences advisor.

Admission to a professional school is very competitive. Students must maintain a high grade-point average in college if they expect to be admitted, even though many schools are changing to a more holistic approach to admissions. All required courses must be taken for letter grades. In addition, the applicant must score well on the appropriate professional admissions test. These tests are designed to measure basic academic ability in the natural sciences, reading ability, and problem solving skills.

Besides academic accomplishments and admission exam scores, acceptance by a professional school is also dependent upon letters of recommendation, volunteer experience, job shadowing, undergraduate research, and personal interviews conducted by the professional school. It is important that students consult with a Pre-Medical Sciences advisor and with an academic advisor in their major each year to make sure that they can satisfy the necessary requirements for graduation within the time available. The Pre-Medical Sciences Director will also discuss procedures, advise, and assist the student during the process of applying to a professional school.

### High School Preparation

## University Of Montana

High school students contemplating a career in the health professions should have three to four years of mathematics, courses in chemistry and physics and a solid background in literature and social science.

## College of Humanities and Sciences

**Julie Baldwin, Associate Dean**

**Matthew Semanoff, Associate Dean**

**Creagh Breuner, Associate Dean**

The College of Humanities and Sciences is the intellectual core of the University of Montana. We fulfill the central purpose for which the University was chartered in 1893: to provide a liberal education and integrated knowledge of the humanities and the sciences.

A liberal arts education gives students the means to think broadly and test the value of diverse ideas, beliefs and facts. It empowers them to continue the learning process throughout life. By studying the ways of thinking and expression that are characteristic of the humanities and the social and natural sciences, students will be educated citizens. They will be enabled to think critically about scientific methods and findings, social analysis, creativity in the arts and humanities, aesthetics and values. Equally important is effective expression of one's understandings. Clear thinking, cogent expression, and solid values provide the foundation of successful careers.

A particular strength of the College is the breadth of its disciplines and programs. This breadth makes possible a varied and flexible curriculum that advances both general programs and specialized education on the undergraduate and graduate levels. Another strength is the quality of the faculty. Its members have a distinguished record of teaching, research and creation of new knowledge, and service to our communities. Their commitment to undergraduate liberal arts education is demonstrated by the quality of the graduates the College has produced. The pre-professional education received here has enabled University of Montana graduates to compete successfully for admission to graduate schools across the nation. A third strength of the College is its commitment to students as they pursue their academic studies at the University. This is reflected in close student/faculty relationships and in the continuous attention given by the College to the effect that policies, procedures, and administrative practices have on students' educational experience.

# African-American Studies

## **Tobin Miller Shearer, Program Director**

African-American Studies at the University of Montana connects African and African-American (including Latin America and the Caribbean) history, experiences, and perspectives with the 21st century. The goal of the African-American Studies curriculum is to develop basic knowledge of, and appreciation for, the diverse experiences of the African Diaspora, and their contributions to the nations into which they were incorporated. Through this study students will recognize that the African-American narrative connects to the core issues of nation formation, identity politics, social movements, and the liberal state. Those who take this minor will likewise be equipped to talk alongside, through, and in the midst of the racial fracture lines that mark this nation as a country where the color of one's skin is socially significant. In all these efforts, we promote scholarship that is driven first and foremost by an interest in creating knowledge and furthering our understanding of the African-American experience. The interdisciplinary curriculum of African-American Studies includes course offerings from the following academic disciplines: anthropology, economics, English, geography, history, music, political science, and sociology. Some topics of study include:

- African heritage and cultural continuity among African-Americans;
- African-American identity issues and cultural variation;
- the history of African-American protest and resistance, including the abolitionist, anti-lynching, and civil rights movements;
- the Harlem Renaissance;
- the social dynamics of integration and segregation; and
- the various circumstances of, and prospects for, African Americans in the 21st century.

Students graduate from this program prepared for exciting careers in social justice advocacy, law, social services, entertainment, business, athletics, and any position that requires sharp analytical skills and the ability to speak with sophistication and nuance about this country's racial divisions.

## Undergraduate Degrees and Certificates

- African-American Studies B.A.
- African-American Studies Certificate

## Undergraduate Minors

- African-American Studies Minor



# African-American Studies B.A.

## Bachelor of Arts - African-American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 36

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Core Courses	15
Elective Courses	18
Capstone	3
Total Hours	36

### Core Courses

		Course List
CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AAST 141H	Black: From Africa to Hip-Hop	3
ANTY 122S	Race and Minorities	3
HSTA 342H	African American History to 1865	3
or HSTA 343H	African American History Since 1865	
SOCI 220S	Race, Gender & Class	3
SOCI 325	Social Stratification	3
Total Hours		15

Minimum Required Grade: C-

## Elective Courses

**Rule:** At least 6 credits of the 18 credits of elective courses must be upper-division (300- or 400-level).

CODE	TITLE	HOURS
<b>Complete 18 credits (including at least 6 upper-division credits) from the following courses:</b>		18
AAST 208H	Africa: From Ancient Egypt to Apartheids Origin	
AAST 225	Race, Inequality & Education	
AAST 250	Human Rights and Mass Incarceration	
AAST 260	African Americans and Native Americans	
AAST 360	White Supremacy - History/Defeat	
AAST 372	African-American Identity	
AAST 375	Black Women: Race, Gender and Sexuality	

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ANTY 330X	Peoples and Cultures of World	
ANTY 349	Social Change	
CRWR 491	Special Topics	
ECNS 217	Issues in Economic Development	
ECNS 312	Labor Economics	
FILM 484	Film Directors	
FRCH 339	Survey of African Cinema	
GPHY 141S	Geography of World Regions	
GPHY 243	Africa	
HSTA 342H	African American History to 1865 (only if not used to complete the core requirement)	
HSTA 343H	African American History Since 1865 (only if not used to complete the core requirement)	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Women in America: From the Colonial Era through the Civil War	
HSTA 371H	Women in America: From the Civil War to the Present	
HSTA 382H	History of American Law	
HSTA 385	Families & Children in America	
HSTA 391	Special Topics	
HSTA 415	The Black Radical Tradition	

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HSTA 417	Prayer & Civil Rights	
HSTA 491	Special topics	
HSTR 262H	Islamic Civil: Classical Age	
LIT 191	Special Topics	
LIT 291	Special Topics	
LIT 304	U.S. Writers of Color	
LIT 343	African American Lit	
LIT 391	Special Topics	
LIT 420	Critical Theory	
LIT 491	Special Topics	
MUSI 130L	History of Jazz	
PSCI 326	Politics of Africa	
PSCI 348	US Multicultural Politics	
PSCI 443	Politics of Social Movements	
SOCI 441	Capstone: Inequality and Social Just	
SOCI 443	Sociology of Poverty	
WGSS 363	Feminist Theory and Methods	
Total Hours		18

Minimum Required Grade: C-

## Capstone

**Rule:** Each student must also complete a 3-credit capstone project as an independent study in which they conduct a research project, service project, activist/organizing project, or artistic project focused on an issue pertinent to the African-American community. All projects must be approved by the African-American

University Of Montana

Studies director.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
AAST 499	Capstone/Thesis	3
Total Hours		3

Minimum Required Grade: C-

# African-American Studies Certificate

## Post-secondary Certificate - African-American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Core Courses	6
Electives	9
Total Hours	15

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AAST 141H	Black: From Africa to Hip-Hop	3
HSTA 342H	African American History to 1865	3
or HSTA 343H	African American History Since 1865	
Total Hours		6

Minimum Required Grade: C-

### Electives

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9

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AAST 208H	Africa: From Ancient Egypt to Apartheids Origin	
AAST 225	Race, Inequality & Education	
AAST 250	Human Rights and Mass Incarceration	
AAST 260	African Americans and Native Americans	
AAST 360	White Supremacy - History/Defeat	
AAST 372	African-American Identity	
AAST 375	Black Women: Race, Gender and Sexuality	
ANTY 122S	Race and Minorities	
FRCH 339	Survey of African Cinema	
GPHY 243	Africa	
HSTA 342H	African American History to 1865 (only if not completing the core requirement)	
HSTA 343H	African American History Since 1865 (only if not completing the core requirement)	
HSTA 344	African-American Struggle for Equality	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Women in America: From the Colonial Era through the Civil War	
HSTA 371H	Women in America: From the Civil War to the Present	
HSTA 385	Families & Children in America	
HSTA 417	Prayer & Civil Rights	
LIT 343	African American Lit	

University Of Montana

SOCI 220S	Race, Gender & Class	
SOCI 325	Social Stratification	
SOCI 443	Sociology of Poverty	

Minimum Required Grade: C-



# African-American Studies Minor

## Minor - African-American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 27

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

African-American Studies Core Courses	6
African-American Studies Electives	9
Other Electives	12
Total Hours	27

### African-American Studies Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AAST 141H	Black: From Africa to Hip-Hop	3
HSTA 342H	African American History to 1865	3
or HSTA 343H	African American History Since 1865	
Total Hours		6

Minimum Required Grade: C-

### African-American Studies Electives

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses, of which at least 3 credits must be upper-division:</b>		9
AAST 208H	Africa: From Ancient Egypt to Apartheids Origin	
AAST 225	Race, Inequality & Education	
AAST 250	Human Rights and Mass Incarceration	
AAST 260	African Americans and Native Americans	
AAST 360	White Supremacy - History/Defeat	
AAST 372	African-American Identity	
AAST 375	Black Women: Race, Gender and Sexuality	
AAST 291	Special Topics	
AAST 491	Special Topics	
HSTA 342H	African American History to 1865 (only if not used to complete the core requirement)	
HSTA 343H	African American History Since 1865 (only if not used to complete the core requirement)	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
Total Hours		9

Minimum Required Grade: C-

## Other Electives

**Rule:** At least two courses must be from different disciplines.

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CODE	TITLE	HOURS
<b>Complete 12 credits of the following courses:</b>		12
ANTY 122S	Race and Minorities	
ANTY 330X	Peoples and Cultures of World	
ANTY 349	Social Change	
ECNS 217	Issues in Economic Development	
FRCH 391	Special Topics (must be African-American Literature)	
GPHY 243	Africa	
HSTA 361	The American South	
HSTA 370H	Women in America: From the Colonial Era through the Civil War	
HSTA 371H	Women in America: From the Civil War to the Present	
HSTA 382H	History of American Law	
HSTA 385	Families & Children in America	
HSTR 262H	Islamic Civil: Classical Age	
LIT 343	African American Lit	
LIT 420	Critical Theory	
MUSI 130L	History of Jazz	
PSCI 326	Politics of Africa	
SOCI 220S	Race, Gender & Class	
SOCI 325	Social Stratification	
SOCI 443	Sociology of Poverty	
Total Hours		12

Minimum Required Grade: C-

# Anthropology

**Anna Prentiss, Co-Chair**

**Meradeth Snow, Co-Chair**

Anthropology is the study of people, both ancient and contemporary, in their biological, archaeological, cultural, and linguistic context. Anthropology uses a holistic approach to integrate findings from the social sciences, natural sciences, and humanities. The primary educational mission of the Department of Anthropology is teaching, research, and professional service in order to impart the critical importance of understanding the human condition and its relevance to an increasingly diverse world. To accomplish this task, the Department of Anthropology provides a curriculum that will help students understand and appreciate the range of human cultures as well as the significance of biological evolution of the human condition. Through our undergraduate and graduate programs, students not only achieve a broad cross-cultural education but also prepare to apply their anthropological knowledge in their chosen career paths. A minor, Bachelor of Arts, Master of Arts, and Doctor of Philosophy degrees are offered in Anthropology, with concentrations or specializations available at every level. For undergraduates, the B.A. can include concentrations in Archaeology, Cultural and Ethnic Diversity, Forensic Anthropology, Linguistics, Medical Anthropology - or a general degree crafted to the interests of the student. Parallel missions to promote the study of human diversity and experience are advanced by the Linguistics Program, which is also housed in the Department. Additional offerings include certificates in Forensic Science and Historic Preservation; these certificates are interdisciplinary by nature, but are administered within the Anthropology Department.

## Baccalaureate Degrees

- Anthropology B.A.
- Anthropology B.A., Archaeology Concentration
- Anthropology B.A., Cultural and Ethnic Diversity Concentration
- Anthropology B.A., Forensic Anthropology Concentration
- Anthropology B.A., Linguistics Concentration
- Anthropology B.A., Medical Anthropology Concentration

## Undergraduate Minors

- Anthropology Minor
- International Development Studies Minor

## Undergraduate Certificates

- Forensic Studies Certificate
- Historic Preservation Certificate

## University Of Montana

- Data Visualization Certificate

## Anthropology B.A.

Anthropology is an interconnected discipline and majors are urged to acquire a broad background especially in the natural and social sciences and the humanities. Recommended areas of study are biology, economics, English, geography, geology, history, communication studies, linguistics, Native American studies, philosophy, political science, psychology, religious studies, and sociology.

### Bachelor of Arts - Anthropology

#### College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** There are no prerequisites to the undergraduate major. The major requires 36 credits in Anthropology, Linguistics, or Native American Studies, 12 of which must be the core offerings. In addition to the core courses, students are required to have a course in statistics. Students must complete the core courses and the statistics course with a letter grade of C- or better.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

## University Of Montana

Lower-Division Core Courses	12
Statistics Requirement	3
Subarea I - Theory and Methods	6
Anthropological Theory	
Anthropological Methods	
Subarea II, III, IV	6
Subarea II: Human Adaptation and Diversity	
Subarea III: World Societies and Cultures	
Subarea IV: Concepts and Issues	
Anthropology or Linguistics Electives	12
Total Hours	39

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

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### Subarea I - Theory and Methods

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### **Anthropological Theory**



CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subareas II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		3

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	

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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology or Linguistics Electives

**Rule:** Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements. 12 total credits required.

Minimum Required Grade: C-

University Of Montana

# Anthropology B.A. - Archaeology

## Bachelor of Arts - Anthropology; Archaeology Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 36-60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** For a degree in Anthropology with a concentration in Archaeology, students must complete all the general major requirements, including a total of nine credits of Archaeology Concentration core requirements and 12 credits in Archaeology electives. Note that in addition to fulfilling concentration requirements, ANTY courses also fulfill certain major requirements.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

University Of Montana

Lower-Division Core Courses	12
Statistics Requirement	3
Subarea I - Theory and Methods	6
Anthropological Theory	
Anthropological Methods	
Subarea II, III, IV	6
Subarea II: Human Adaptation and Diversity	
Subarea III: World Societies and Cultures	
Subarea IV: Concepts and Issues	
Anthropology and Linguistics Electives	12
Archaeology Concentration Core Courses	9
Area	
Theory	
Methods	
Archaeology Allied Science Electives	12
Total Hours	60

**Lower-Division Core Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

### Subarea I - Theory and Methods

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### Anthropological Theory



CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subarea II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	

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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology and Linguistics Electives

**Rule:** Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements. 12 total credits required.

Minimum Required Grade: C-

## Archaeology Core Courses

**Rule:** Complete one course from each of the 3 Archaeology Core Course subcategories: Area, Theory, and Methods. 9 total credits required.

### Area

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 451	Cultural Resource Management	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
Total Hours		3

Minimum Required Grade: C-

### Theory

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
Total Hours		3

Minimum Required Grade: C-

### Methods

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
Total Hours		3

Minimum Required Grade: C-

## Archaeology Allied Science Electives

**Rule:** Complete 6 credits in Biology, Geography, or Geology. All 6 credits must be in the same discipline.

**Rule:** Complete 6 credits in Computer Science, Environmental Studies, Forestry, History, Native American Studies, or Mathematical Sciences. All 6 credits must come from the same discipline.

12 total credits required.

Minimum Required Grade: C-

## **Anthropology B.A. - Cultural and Ethnic Diversity**

### **Bachelor of Arts - Anthropology; Cultural and Ethnic Diversity Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 36 - 63

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** For a degree in Anthropology with a concentration in Cultural and Ethnic Diversity, the student must meet all the general requirements for the major, including the four required courses for this concentration (ANTY 122S, ANTY 310, ANTY 423, and ANTY 330X) and 12 credits of concentration electives. Note that in addition to fulfilling concentration requirements, ANTY courses also fulfill certain major requirements.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**



## University Of Montana

Lower-Division Core Courses	12
Statistics Requirement	3
Subarea I - Theory and Methods	6
Anthropological Theory	
Anthropological Methods	
Subarea II, III, IV	6
Subarea II: Human Adaptation and Diversity	
Subarea III: World Societies and Cultures	
Subarea IV: Concepts and Issues	
Anthropology and Linguistics Electives	12
Cultural and Ethnic Diversity Concentration Core Requirements	12
Cultural and Ethnic Diversity Concentration Electives	12
Total Hours	63

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

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### Subarea I - Theory and Methods

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### **Anthropological Theory**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subareas II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	

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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology and Linguistics Electives

**Rule:** Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements. 12 total credits required.

Minimum Required Grade: C-

## Cultural and Ethnic Diversity Concentration Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 122S	Race and Minorities	3
ANTY 310	Human Variation	3
ANTY 330X	Peoples and Cultures of World	3
ANTY 423	Culture and Identity	3
Total Hours		12

Minimum Required Grade: C-

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## Cultural and Ethnic Diversity Concentration Electives

**Rule:** Complete 6 credits of advisor approved electives in Anthropology, History, or Sociology. Please see your advisor about which courses may fulfill this requirement.

**Rule:** Complete 6 credits of advisor approved electives in African-American Studies, Asian Studies, Native American Studies, or Women's Studies. Please see your advisor about which courses may fulfill this requirement.

12 total credits required.

Minimum Required Grade: C-



## **Anthropology B.A. - Forensic Anthropology**

### **Bachelor of Arts - Anthropology; Forensic Anthropology Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 36-66

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** For a degree in Anthropology with a concentration in Forensic Anthropology the student must meet all the general requirements for the major, as well as the Forensic Anthropology Core Courses and electives. Note that in addition to fulfilling concentration requirements, ANTY courses also fulfill major requirements.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

CODE	TITLE	HOURS
Lower-Division Core Courses		12
Statistics Requirement		3
Subarea I - Theory and Methods		6
Anthropological Theory		
Anthropological Methods		
Subarea II, III, IV		6
Subarea II: Human Adaptation and Diversity		
Subarea III: World Societies and Cultures		
Subarea IV: Concepts and Issues		
Anthropology and Linguistics Electives		12
Forensic Anthropology Concentration		27
Concentration Requirements		
Concentration Electives		
Total Hours		66

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

## Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

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### Subarea I - Theory and Methods

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### **Anthropological Theory**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subareas II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	

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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology and Linguistics Electives



CODE	TITLE	HOURS
<b>Complete the following elective credits:</b>		12
<b>Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements.</b>		

Minimum Required Grade: C-

### Forensic Anthropology Concentration Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 310	Human Variation	3
ANTY 314	Principles of Forensic Anthro	3
CJUS 125N	Fund of Forensic Science	3
SOCI 211S	Introduction to Criminology	3
or SOCI 221	Criminal Justice System	
<b>Complete one of the following courses:</b>		3
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
Another approved 400-level course with a lab or field component in physical anthropology, archaeology, non-human osteology, geographic information systems (GIS), subsurface imaging, chemical analysis, genetic/evolutionary analysis, or multivariate statistics.		
Total Hours		15

Minimum Required Grade: C-

### Forensic Anthropology Concentration Electives

CODE	TITLE	HOURS
<b>Complete the following elective credits:</b>		12
<p><b>Complete 12 credits in courses relevant to the forensic sciences, such as (but not limited to) physical anthropology beyond ANTY 210N, archaeology beyond ANTY 250S, Biology, Chemistry, Criminology, Drawing, Geosciences, Pharmacy, Photography, Public Speaking, or Psychology. Courses in ANTY or LING may count as electives for the anthropology major. Please speak with an advisor in the Anthropology Department about which courses complete this requirement.</b></p>		

Minimum Required Grade: C-

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# Anthropology B.A. - Linguistics

## Bachelor of Arts - Anthropology; Linguistics Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 36-51

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** For a degree in Anthropology with a concentration in Linguistics the student must meet all the general requirements for the major, in addition to completing the Linguistics Concentration core courses and electives.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	12
Statistics Requirement	3
Subarea I - Theory and Methods	6
Anthropological Theory	
Anthropological Methods	
Subarea II, III, IV	6
Subarea II: Human Adaptation and Diversity	
Subarea III: World Societies and Cultures	
Subarea IV: Concepts and Issues	
Anthropology and Linguistics Electives	12
Linguistics Concentration Requirements	6
Linguistics Concentration Electives	6
Total Hours	51

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

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### Subarea I - Theory and Methods

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### **Anthropological Theory**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subareas II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity

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CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	



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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology and Linguistics Electives

**Rule:** Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements. 12 total credits required.

Minimum Required Grade: C-

## Linguistics Concentration Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 470	Linguistic Analysis	3
LING 473	Language and Culture	3
Total Hours		6

Minimum Required Grade: C-

## Linguistics Concentration Electives

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LING 375X	Linguistic Ecology and Language Endangerment	
LING 471	Phonetics and Phonology	
LING 472	Syntax	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
LING 477	Bilingualism	
LING 478	Learner Language	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
Total Hours		6

Minimum Required Grade: C-

# Anthropology B.A. - Medical Anthropology

## Bachelor of Arts - Anthropology; Medical Anthropology Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 36-51

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** For a degree in Anthropology with a concentration in Medical Anthropology, the student must meet all of the general requirements for the major, as well as completing the Medical Anthropology Core Courses and Electives. Note that in addition to fulfilling concentration requirements, ANTY courses also fulfill certain major requirements.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	12
Statistics Requirement	3
Subarea I - Theory and Methods	6
Anthropological Theory	
Anthropological Methods	
Subarea II, III, IV	6
Subarea II: Human Adaptation and Diversity	
Subarea III: World Societies and Cultures	
Subarea IV: Concepts and Issues	
Anthropology and Linguistics Electives	12
Medical Anthropology Concentration Requirements	3
Medical Anthropology Concentration Electives	9
Total Hours	51

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Statistics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 401	Anthropological Data Analysis	
ECNS 403	Introduction to Econometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
FORS 201	Forest Biometrics	

Minimum Required Grade: C-

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### **Subarea I - Theory and Methods**

**Rule:** Complete 3 credits in Theory and 3 credits in Methods: 6 total credits required.

#### **Anthropological Theory**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 403	Public Anthropology	
ANTY 404	Anthropological Museology	
ANTY 415	Emergence Modern Humans	
ANTY 430	Social Anthropology	
ANTY 450	Archaeological Theory	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
LING 470	Linguistic Analysis	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Anthropological Methods**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 402	Quan Ethnographic Field Methds	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 416	Dental Anthropology	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 431	Ethnographic Field Methods	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	
ANTY 495	Field Experience:	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Subareas II, III, IV

**Rule:** Complete 6 credits from 2 of 3 subareas: 6 total credits required.

### Subarea II: Human Adaptation and Diversity



CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 133X	Food and Culture	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 426	Culture, Health and Healing	
LING 375X	Linguistic Ecology and Language Endangerment	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Subarea III: World Societies and Cultures**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 241H	Central Asian Culture and Civ	
ANTY 251	Foundations of Civilization	

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ANTY 254X	Arch Wonders of the World	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Archof the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	
ANTY 494	Seminar/Workshop	
Total Hours		3

Minimum Required Grade: C-

**Subarea IV: Concepts and Issues**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 126	Anthropology and Global Health	
ANTY 216	Primates in Peril	
ANTY 314	Principles of Forensic Anthro	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Anthropology and Linguistics Electives

**Rule:** Complete 12 credits in Anthropology and Linguistics electives not completing core or subarea requirements. 12 total credits required.

Minimum Required Grade: C-

### Medical Anthropology Concentration Requirements

<b>Complete the following course:</b>		
ANTY 426	Culture, Health and Healing	3
Total Hours		3

Minimum Required Grade: C-

### Medical Anthropology Concentration Electives

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ANTY 126	Anthropology and Global Health	
ANTY 333	Culture and Population	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 422	Mind, Culture and Society	
ANTY 435	Drugs, Culture and Society	
ANTY 433	Indig Global Health & Healing	
Total Hours		9

Minimum Required Grade: C-

# Anthropology Minor

## Minor - Anthropology

College of Humanities & Sciences

**Degree Specific Credits: 18**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

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### Summary

Lower-Division Core Courses	12
Subarea I Electives	3
Subareas II, III and IV Electives	3
Total Hours	18

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### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 210N	Intro to Physical Anthropology	3
ANTY 220S	Culture & Society	3
ANTY 250S	Intro to Archaeology	3
LING 270S	Intro to Linguistics	3
Total Hours		12

Minimum Required Grade: C-

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### Subarea I Electives

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CODE	TITLE	HOURS
<b>Complete at least 3 credits in one the following courses:</b>		3
ANTY 312	Human Evolution	
ANTY 400	History of Anthropology	
ANTY 402	Quan Ethnographic Field Methds	
ANTY 404	Anthropological Museology	
ANTY 403	Public Anthropology	
ANTY 408	Advanced Anthro Statistics	
ANTY 412	Osteology	
ANTY 413	Forensic and Mortuary Arch	
ANTY 415	Emergence Modern Humans	
ANTY 416	Dental Anthropology	
ANTY 430	Social Anthropology	
ANTY 431	Ethnographic Field Methods	
ANTY 450	Archaeological Theory	
ANTY 451	Cultural Resource Management	
ANTY 454	Lithic Technology	
ANTY 455	Artifact Analysis	
ANTY 456	Historical Archaeology	
ANTY 458	Arch of Hunter-Gatherers	
ANTY 466	Archaeological Survey (must be taken for 3 or more credits)	
ANTY 467	Archaeological Field School	
ANTY 476	Methods for Native Languages	

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ANTY 495	Field Experience: (must be taken for 3 or more credits)	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
Total Hours		3

Minimum Required Grade: C-

### Subareas II, III, and IV Electives

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
ANTY 102H	Intro to South & S. East Asia	
ANTY 104	Ancient Migrations	
ANTY 122S	Race and Minorities	
ANTY 126	Anthropology and Global Health	
ANTY 133X	Food and Culture	
ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ANTY 211N	Anthropological Genetics	
ANTY 310	Human Variation	
ANTY 314	Principles of Forensic Anthro	
ANTY 323X	Native Peoples of Montana	

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ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 330X	Peoples and Cultures of World	
ANTY 333	Culture and Population	
ANTY 336	Myth, Ritual and Religion	
ANTY 349	Social Change	
ANTY 351H	Archaeology of North America	
ANTY 352X	Archaeology of Montana	
ANTY 353	PaleoIndian Archaeology	
ANTY 354H	Mesoamerican Prehistory	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 426	Culture, Health and Healing	
ANTY 427	Anthropology of Gender	
ANTY 435	Drugs, Culture and Society	
ANTY 440	Cont. Issues of SSEA	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 457	Arch of the Pacific Northwest	
ANTY 459	Arch of the Arctic/Subarctic	
ANTY 465	Arch of the SW United States	



LING 375X	Linguistic Ecology and Language Endangerment	
LING 473	Language and Culture	
LING 477	Bilingualism	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology	
NASX 306X	Contemp Global Iss Indg People	
Total Hours		3

Minimum Required Grade: C-

## South and South-East Asian Studies Minor

### Ruth Vanita and G.G. Weix, Directors

The South and South-East Asian Studies program offers undergraduates at the University of Montana-Missoula an 18-credit autonomous and interdisciplinary minor to students of all majors, and also offers all students opportunity to take classes on South and Southeast Asian peoples, cultures, histories, and societies, as well as their literary, artistic and religious traditions. The region includes India, Nepal, Bhutan, Tibet, Sri Lanka, Pakistan, Bangladesh, Myanmar (Burma), Thailand, Laos, Cambodia, Vietnam, Malaysia, Brunei, Singapore, Indonesia, East Timor, and the Philippines. The primary focus is on India and Indonesia.

This is an interdisciplinary program with faculty input from several departments, including English, Anthropology, Sociology and Political Science.

Students may choose to minor in South and South-East Asian Studies with a major in any discipline. Students interested in the minor should contact Professor **Ruth Vanita** and are encouraged to plan their course sequence at least one semester in advance.

## Minor - South & South-East Asian Studies

### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Requirements	9
Introductory Course	
Lower-Division Electives	
Upper-Division Electives	9
Total Hours	18

### Lower-Division Requirements

**Rule:** Complete the following subcategories of courses. Any substitutions must be approved by the SSEA faculty director.

#### Introductory Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 102H	Intro to South & S. East Asia	
GH 161H	Asian Humanities	
SSEA 202X	Introduction to India	
Total Hours		3

Minimum Required Grade: C-

### Lower-Division Electives

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
ANTY 102H	Intro to South & S. East Asia	
GH 191	Special Topics (6 credits of Hindi language (any level) may count towards the total credits for the minor)	
GH 161H	Asian Humanities	
GH 291	Special Topics	
RLST 232	Buddhism	
SSEA 234H	Hindu Religious Traditions	
Total Hours		6

Minimum Required Grade: C-

### Upper-Division Electives

**Note:** Any substitutions must be approved by the SSEA director.

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CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
ANTY 427	Anthropology of Gender	
ANTY 440	Cont. Issues of SSEA	
GH 316E	Talking to God: Bhagavad Gita	
GH 326	Stories East and West	
GH 328L	Gender Sexuality India	
GH 415	Same Sex Unions Literature	
LIT 344	Asian American Literature	
SSEA 330X	Peoples and Cultures of World	
SSEA 342	Topics Comparative Lit & Rel	
SSEA 368	Contemporary Buddhism in SSEA	
RLST 366	Tibetan Civilization	
Total Hours		9

Minimum Required Grade: C-

# Data Visualization Certificate

The Data Visualization Certificate brings together courses from diverse disciplines to provide the knowledge and skills required to build meaningful data visualizations. Students discover how artistic design, Big Data analytics, and research methods come together with the help of data visualization software tools to effectively communicate information.

## Post-secondary Certificate - Data Visualization

### College of Humanities & Sciences

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Technology Component	3
Analytic Component	3
Design and Communication Component	3
Research Methods Component	3
Total Hours	12

### Technology Component

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ANTY	Data Visualization Tools	3
Total Hours		3

Minimum Required Grade: C-

### Analytic Component

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
BMIS 326	Introduction in Data Analytics	3
Total Hours		3

Minimum Required Grade: C-

**Design and Communication Component**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
ARTZ 380	Data Arts	3
Total Hours		3

Minimum Required Grade: C-

**Research Methods Component**

University Of Montana

CODE	TITLE	HOURS	
<b>Complete one of the following courses:</b>		3	
ANTY 401	Anthropological Data Analysis		
ANTY 408	Advanced Anthropological Statistics		
ANTY 412	Osteology		
ANTY 431	Ethnographic Field Methods		
ANTY 455	Artifact Analysis		
COMX 460	Communication Research Methods		
ECNS 403	Introduction to Econometrics		
EDU 421	Statistical Procedures in Education		
JRNL 414	Investigative Reporting		
LING 475	Linguistic Field Methods		
PSCI 342	Media, Public Opinion, Polling		
PSYX 120	Introduction to Psychological Research Methods		
PSYX 222	Psychological Statistics		
SOCI 202	Social Statistics		
SOCI 318	Sociological Research Methods		
STAT 216	Introduction to Statistics		
Total Hours		3	

Minimum Required Grade: C-

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## Forensic Studies Certificate

The Certificate in Forensic Studies is designed so that students may complete the requirements either as resident students at UM-Missoula or completely online through UM-Missoula's online facility.

To earn a certificate in Forensic Studies the student must complete a minimum of 18 credits, including 6 credits in core forensic science courses.

### Post-secondary Certificate - Forensic Studies

#### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Certificate in Forensic Studies is primarily designed as a step toward a baccalaureate degree for those interested in a career in the forensic sciences or a related field. It is also designed as an avenue for law enforcement agents, forensic scientists, or other professionals in the justice system to satisfy mandatory continuing education requirements for continued employment or promotion.

#### Summary

Core Courses	6
Science Electives	6
Communication Elective	3
Ethics Elective	3
Total Hours	18

#### Core Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CJUS 125N	Fund of Forensic Science	3
CJUS 488	Forensic Science the Crime Lab and Beyond	3
Total Hours		6

Minimum Required Grade: C-

## Science Electives

**Rule:** Must complete 6 credits. To meet this requirement, students must complete six credits in courses with a suffix of "N" (courses that have been designated as University of Montana- Missoula General Education Group XI, Natural Sciences) in any department. Any Criminology courses offered through the Sociology department also count towards meeting this requirement. Courses numbered under 100 may not be counted toward meeting this requirement. Please speak with your advisor about which courses may meet this requirement.

Minimum Required Grade: C-

6 Total Credits Required

## Communication Elective

**Rule:** Must complete a 3 credit course. To meet this requirement, students must complete one 3-credit course related to written, oral, or pictorial communication, including selected courses in Art, Curriculum & Instruction, Communication Studies, Computer Science, Forestry, Journalism, Linguistics, Media Arts or any intermediate or advanced writing course. Courses numbered under 100 may not be counted toward meeting this requirement. WRIT 101 will not be accepted as fulfilling this requirement. Please speak with your advisor about which courses may meet this requirement.

Minimum Required Grade: C-

3 Total Credits Required

## Ethics Elective

**Rule:** Must complete a 3 credit course. To meet this requirement, students must complete one 3-credit course that has been designated as a University of Montana - Missoula General Education Group VIII (Ethics and Human Values) course in any department.

Minimum Required Grade: C-

3 Total Credits Required

# Historic Preservation Certificate

Historic Preservation is the interdisciplinary field that seeks to identify, document, preserve and protect significant structures, sites and landscapes.

## Post-secondary Certificate - Historic Preservation

### College of Humanities & Sciences

**Degree Specific Credits: 18**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Core Courses	12
History Electives	3
Internship or Independent Study	3
Total Hours	18

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 451	Cultural Resource Management	3
ANTY 456	Historical Archaeology	3
GPHY 465	Planning Principles & Processes	3
HPRV 400	Historic Preservation	3
Total Hours		12

Minimum Required Grade: C

### History Electives

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
HSTA 320	Birth of Modern US	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
Total Hours		3

Minimum Required Grade: C

### Internship or Independent Study

**Note:** Internship must be with an approved, appropriate preservation-based agency or focused on an approved preservation-based topic.

CODE	TITLE	HOURS
<b>Complete three credits of the following courses:</b>		3
ANTY 398	Internship	
ANTY 492	Independent Study	
Total Hours		3

Minimum Required Grade: C

## Anthropology M.A.

University of Montana Department of Anthropology offers courses of study leading to the Master of Arts (M.A.) degree in Anthropology.

Successful completion of the M.A. degree in anthropology requires coursework, successful completion of a comprehensive evaluation, and significant original scholarly work. The anthropology faculty expects that students will complete the requirements for the M.A. degree in two years.

### Master of Arts - Anthropology

#### College of Humanities & Sciences

**Required Credits (Thesis/Professional Project):** 30

**Required Credits (Non-Thesis):** 36

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Background Classes

Background Classes Required for All Students in the Anthropology Graduate Program. These classes may have been taken previously as an undergraduate. These classes may be used as electives.

- We strongly recommend one class in each of the four fields of Anthropology
- We strongly recommend one or more classes in statistics or quantitative methods
- We strongly recommend one year of a foreign language

### Thesis or Professional Paper Option

- Meet with advisor to form a study plan ANTY 500 Contemporary Anthropological Thought
- Anthropology/Linguistics Graduate Seminar (numbered 501-589, 595, 600-602, or 694)
- Anthropology/Linguistics Graduate Seminar (numbered 501-589, 595, 600-602, or 694)
- Anthropology/Linguistics Graduate Seminar or 3 credit Internship (numbered 501-589, 595, 598, 600-602, or 694)
- 6 credits in ANTY 593 Professional Project or ANTY 599 Thesis
- One "methods" class numbered 400 or higher (ANTY 402, 408, 412, 413, 416, 431, 451, 452, 454, 455, 456, 466, 467, 476, 495, 501, 512, 513, 514, 602; LING 475, 478, 570, 575, 575, 584; or an *anthropological or linguistic field experience of at least 3cr*. Courses marked with an asterisk may be taught as methods or theory and the students committee will determine whether or not to count it for this requirement.

## University Of Montana

- 9 credits in elective classes numbered 400 (UG) to 595.
- Thesis or Professional Paper
- Defense of Thesis or Professional Paper

## Non-thesis Option

- ANTY 500 Contemporary Anthropological Thought
- Anthropology/Linguistics Graduate Seminar (numbered 501-589, 595, 600-602, or 694)
- Anthropology/Linguistics Graduate Seminar (numbered 501-589, 595, 600-602, or 694)
- Anthropology/Linguistics Graduate Seminar or 3 credit Internship (numbered 501-589, 595, 598, 600-602, or 694)
- A Graduate class (numbered 500-589 or 595) in any Discipline (Anthro is OK)
- One "methods" class numbered 400 or higher (ANTY 402, 408, 412, 413, 416, 431, 451, 452, 454, 455, 456, 466, 467, 476, 495, 501, 512, 513, 514, 602; LING 475, 478, 570, 575, 575, 584; *or an anthropological or linguistic field experience of at least 3cr.* Courses marked with an asterisk may be taught as methods or theory and the students committee will determine whether or not to count it for this requirement.
- 12 credits in elective classes numbered 400 to 589, 595, 600-602, 694
- A substantive graduate work such as an exhibit, portfolio, or other work that is not a thesis or professional paper
- Defense of the graduate work produced or a comprehensive examination

## Anthropology M.A. - Cultural Heritage Option

The Cultural Heritage Option is a way to earn the MA degree in anthropology while focusing on methods and theories related to preserving the culture, heritage, and diversity of all peoples. It is designed to produce professionals in the many areas of culture heritage preservation who are firmly grounded in the fundamentals of anthropology. This is a broad option, which can accommodate students with interests in a variety of areas, including:

- Cultural Resource Management, Historic Preservation, Prehistoric Archaeology, and similar archaeologically focused studies
- Ethnohistory, Tribal Recognition, Culture Preservation, Language Retention, and similar ethnographically focused studies
- Museology, Educational Anthropology, Public Archaeology, and similar areas that focus on interpreting cultures for the general public

The curriculum for students choosing this option is chosen in consultation with an appropriate faculty advisor, who will help guide the student toward appropriate classes for fulfilling their goals. Since this option is designed to train professionals, the focus is on practical professional experiences, which may include an internship with an appropriate company or agency. Out of which will emerge a professional paper, exhibit, portfolio, or other original creative work that is used to satisfy the MA degree requirements. Students who satisfactorily complete one of the following sets of requirements (plans) will earn the Master of Arts degree in Anthropology with the Cultural Heritage option.

## Master of Arts - Anthropology - Cultural Heritage Option

### College of Humanities & Sciences

**Required Credits (Thesis/Professional Project): 30**

**Required Credits (Non-Thesis): 36**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

### Thesis or Professional Paper Plan

(30 credits total)

- Anthropology 500, 601, and 602.
- At least 3 credits of Cooperative Education Experience (ANTH 598), or a course providing an intensive field or practical experience (and, in order to satisfy Graduate School requirements, one additional anthropology graduate seminar if the intensive field or practical experience course is not 500 or 600 level). Normally, the thesis or professional project is an outgrowth of this experience.

## University Of Montana

- A total of 1 to 10 credits in ANTH 599 (Thesis) or 593 (Professional Project), consistent with Graduate School requirements (6 credits recommended).
- At least one methods class numbered 400 or higher.
- A defended Thesis or Professional Paper/Project. A thesis is a document that presents the results of research in which data was gathered or analyzed in order to test a hypothesis. A professional paper consists of a project, report, exhibit, or similar scholarly contribution of the sort produced by professionals in the field of cultural heritage studies; or a scholarly work published in a refereed journal or other reviewed forum.

## Non-thesis Plan

(36 credits total)

- Anthropology 500, 601, 602 and one additional anthropology graduate seminar chosen in consultation with the student's advisor.
- At least 3 credits of Cooperative Education Experience (ANTH 598) or a course providing an intensive field or practical experience (and, in order to satisfy Graduate School requirements, one additional anthropology graduate seminar if the intensive field or practical experience course is not 500 or 600 level). Normally, the scholarly work or portfolio is an outgrowth of this experience.
- A total of 1 to 10 credits in ANTH 597 (Research), consistent with Graduate School requirements (6 credits recommended).
- At least one methods class numbered 400 or higher.
- A comprehensive evaluation (a defense if the scholarly work or portfolio will satisfy this requirement, otherwise it may be administered as an examination)
- A reviewed scholarly work or portfolio (collection of shorter scholarly works).

# Anthropology M.A. - Forensic & Biological Anthropology

## Track Options

The forensic anthropology option is a way to satisfy the requirements for the Master of Arts (MA) degree in anthropology while concentrating on classes of relevance to forensic anthropology. There are three pathways to doing this:

### Thesis Track

Students may develop and demonstrate research skill by formulating a research project designed to contribute original knowledge to the field of forensic anthropology, bioarchaeology, human variation, or human skeletal biology, with the findings presented in a thesis. Pursuing this track will help the student prepare to pursue a career as a forensic or physical/biological anthropologist, or to continue their graduate education toward a doctorate.

### Professional Paper Track

Students may develop and demonstrate competency in the skills forensic anthropologists by undertaking a project that results in a report, exhibit, or other scholarly contribution of the sort produced by professionals in the field. A scholarly work published in a refereed journal or other reviewed forum is also considered a professional paper. Due to the limited nature of our skeletal collection, many students choose to analyze a case from the teaching collection and produce a comprehensive case report type of professional paper. Pursuing this track will help the student prepare for a career as a forensic anthropologist or other career that emphasizes the practical application of skills in skeletal analysis.

### The Portfolio Track

(The Graduate School refers to this as a non-thesis option) Students may design a MA program in which they specify a set of goals and a set of courses and other experiences that lead to achievement of these goals. Students demonstrate progress toward and satisfaction of their goals by collecting the work produced in their courses and other experiences into a portfolio. This track requires more course work than the thesis track or professional paper track. This track is designed for students who do not plan to work professionally as a forensic or physical/biological anthropologist or who plan to use their MA degree in another context (for example, educators seeking an MA degree in a field of science).

## Master of Arts - Anthropology - Cultural Heritage Option

### College of Humanities & Sciences

**Required Credits (Thesis/Professional Project): 30**

**Required Credits (Non-Thesis): 36**

**Required Cumulative GPA: 3.0**



Catalog Year: 2021-22

## Requirements

### Core Requirements

Students who complete the core requirements and one of the tracks described below will earn the M.A. Degree in Anthropology with the Forensic Anthropology Option. A detailed checklist for this option can be downloaded from the Anthropology Department website.

**Core requirements for all students** in the forensic anthropology option, regardless of whether they are pursuing the thesis, professional paper, or portfolio track:

- The following five (5) anthropology graduate seminars: ANTY 500, 510, 512, 513, and 515.
- A set of background courses, which ideally will have been taken previously as an undergraduate. At least one course must have been taken in each of these five areas, though it is possible with approval of the student's advisor for one course to count as both a forensic anthropology course and an osteology course. Students who enter the program without having previously completed these background courses must complete them before their MA degree is awarded and should realize that they may need more than the minimum number of credits to complete their MA degree
  - Forensic anthropology - a lecture or lecture plus laboratory course covering the principles of forensic anthropology (such as ANTY 314);
  - Osteology - a laboratory or lecture plus laboratory course covering skeletal anatomy (such as ANTY 412);
  - An archaeological field experience (such as ANTY 413, 466, or a volunteer or paid archaeological field experience);
  - General forensic science (such as CJUS 488);
  - Statistics (such as ANTY 401).

### Thesis Track

In addition to the core requirements:

- A total of 1 to 10 credits in ANTY 599: Thesis, consistent with Graduate School requirements (6 credits recommended).
- Other appropriate courses as necessary to accumulate a total of 30 credits. ANTY 408 (formerly ANTH 402) is strongly recommended);
- A thesis that makes an original contribution to the field of physical/biological anthropology by applying data to test a hypothesis;
- A defense of the thesis.

### Professional Paper Track

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In addition to the core requirements:

- A total of 1 to 10 credits in ANTY 593: Professional Project, consistent with Graduate School requirements (6 credits recommended);
- Other appropriate courses as necessary to accumulate a total of 30 credits;
- A professional quality report, exhibit, or other scholarly contribution of the sort produced by professional forensic or physical/biological anthropologists.
- A defense of the professional paper, exhibit, or scholarly contribution.

### Portfolio (Non-Thesis) Track

In addition to the core requirements:

- A total 1 to 10 credits in ANTH 597: Research, consistent with Graduate School requirements (6 credits recommended);
- One additional graduate seminar course numbered 500-589, 595, 598, or 600-694;
- Other appropriate courses as necessary to accumulate a total of 36 credits;
- A portfolio that documents the student's satisfaction of their educational goals and which is reviewed by the student's committee;
- A comprehensive evaluation (a defense of the portfolio will satisfy this requirement - otherwise it may be administered as an examination).

## Anthropology M.A. - Linguistics

The option is designed for students who wish to pursue studies of linguistics, languages, or linguistic analysis. The program's focus is on regional Native American languages, native language revitalization and maintenance, and English as a second language.

The Linguistics Option is primarily oriented toward academic research and most students conduct original research that results in a thesis that is used to satisfy the MA degree requirements. Classes are chosen with advice from a faculty advisor to fulfill the student's goals.

## Master of Arts - Anthropology - Linguistics Option

### College of Humanities & Sciences

**Required Credits: 30**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

Students who satisfactorily complete the following core requirements will earn the Master of Arts degree in Anthropology with the Linguistics option.

- Anthropology 500, LING 570, and 6 credits in additional Anthropology or Linguistics graduate seminars; this total may include 3 credits in an appropriate cooperative education experience (internship).
- A total 1 to 10 credits in ANTH 599, consistent with graduate school requirements (6 credits recommended).
- Four courses from LING 470-475 or 484, if not taken as an undergraduate.

**NOTE:** This option differs from the [MA in Linguistics](#), offered through the Linguistics Program.

## Anthropology Ph.D.

The PhD in Anthropology with General Option requires 60 credits total beyond the bachelor's degree, completion of the coursework for one of the UM Anthropology MA Options or an equivalent 30+ credit master's degree from another institution, completion of courses in specific areas of the curriculum, a comprehensive examination consisting of a defense of the student's research proposal, a dissertation on a topic of relevance to Anthropology, and a defense of the dissertation.

### Doctor of Philosophy - Anthropology

#### College of Humanities & Sciences

**Required Credits:** 60 (30 + 30 from M.A.)

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Degree Requirements

The General Option requires coursework, a reviewed portfolio, a comprehensive examination, and a defended dissertation. The faculty expects completion of the Ph.D. within three years of earning the master's degree. All students entering the Ph.D. program must have the equivalent of an M.A. degree before they can proceed to Ph.D. status. For students accepted into the program with only an undergraduate degree, they must complete the requirements of an M.A. degree prior to moving into the Ph.D. program. Students initially accepted into the M.A. program can continue into the Ph.D. program, but they must complete the M.A. degree prior to continuing; those students must also apply for the Ph.D. program during the regular application cycle (even though they are extant M.A. students).

#### Coursework

Coursework for the Ph.D. General Option requires 30 credits beyond those required for the master's degree, for a total of 60 credits. At least 20 of these credits must be in ANTY or LING. A maximum of 10 credits in research courses (ANTY 593, 597, 599, 697, 699) may be applied to these 30 credits. No more than 9cr total in any combination of Independent Studies and Internship courses may be applied to these 30 credits.

#### Curriculum

The curriculum for the 60 credits required for the General Ph.D. Option focuses on a solid grounding in anthropological theory, methods for generating or collecting anthropological data, and methods for analysis of anthropological data. All students must take (or have taken) ANTY 500, ANTY 601, and a course in introductory statistics such as ANTY 401. In addition, at least one course must be taken from each of the areas below. Reasonable substitutions of courses, including courses from other departments and institutions, may be approved by the student's committee.

## **Anthropological theory:**

- ANTY 510\*: Seminar in Human Variation & Evolution
- ANTY513\*#: Seminar in Bioarchaeology & Skeletal Biology
- ANTY514\*#: Seminar in Paleoanthropology & Evolutionary Analysis
- ANTY515: Theory & Methods in Biological Anthropology
- ANTY520\*: Seminar in Ethnology
- ANTY521: Applied Anthropology
- ANTY522: Medical Anthropology
- ANTY550: Seminar in Archaeology
- ANTY551: Seminar in Historical Archaeology
- ANTY552: Power, Prestige & Things
- ANTY553: Seminar in Evolutionary Archaeology
- ANTY600: Issues in Cultural Heritage
- LING 570\*: Seminar in Linguistics
- LING573: Language & Culture

## **Methods for generating or collecting anthropological knowledge:**

- ANTY 412: Osteology
- ANTY413: Forensic & Mortuary Archaeology
- ANTY416: Dental Anthropology
- ANTY431: Ethnographic Field Methods
- ANTY451: Cultural Resource Management
- ANTY466\*: Archaeological Survey
- ANTY467\*: Archaeological Field School
- ANTY476: Methods for Native Languages
- ANTY495\*: Field Experience
- ANTY501: Historical Anthropology
- ANTY512\*: Advanced Forensic Anthropology
- ANTY602: Cultural Heritage Policy & Practice

## University Of Montana

- LING 571: Phonetics & Phonology
- LING575: Linguistic Field Methods
- LING584: North American Indigenous Languages
- LING589: Morphology

### Analysis of anthropological data:

- ANTY402: Quantitative Ethnographic Methods
- ANTY408: Advanced Anthropological Statistics
- ANTY452: GIS in Archaeology
- ANTY454: Lithic Technology
- ANTY455: Artifact Analysis
- ANTY513\*#: Seminar in Bioarchaeology & Skeletal Biology
- ANTY514 #: *Seminar in Paleoanthropology & Evolutionary Analysis*
- LING 574: Historical Linguistics

### Coursework

Students are expected to complete the following course requirements:

Please refer to the [Graduate Student Manual](#) for specific curriculum that is required of the General Option Ph.D.

## Anthropology Ph.D. - Cultural Heritage and Applied Anthropology

Our doctoral program specializes in Cultural Heritage and Applied Anthropology. Students in this program focus not only on cutting-edge research, but also the application of anthropology to one or more central issues of the 21st century. These include the preservation of heritage and traditions, whether objects, landscapes, or language; international social issues, particularly global development and health delivery; or understanding the biological basis of humankind. This program requires more extensive coursework than the M.A. and, even more importantly, the achievement of independent professional-level scholarship demonstrated by completion of a major research project presented to the faculty as a dissertation. This comprehensive yet individualized program provides seasoned professionals and recent B.A. and M.A. graduates alike an opportunity to earn a Doctorate.

Cultural heritage studies analyzes 'heritage' as an archaeological, ethnohistorical, social, biological, linguistic, and legal construct. Heritage reflects a socially and personally important set of cultural, linguistic, and biological attributes that has developed through historical processes, which have social and legal meanings and consequences. The concept recognizes diverse ethnic and cultural backgrounds while grounded in principles of the unity of heritage for all people. Different notions of heritage are explored from a theoretical perspective using various anthropological and other relevant paradigms. The course of study covers topics such as cultural resource management, social impact assessment, the interaction between cultures, invention of tradition through time, cultural landscapes, cultural property, biological heritage issues, and retention of culture and language. An overlapping concern of the Ph.D. program is applied anthropology, the use of the anthropological perspective to solve real-world problems, including cultural heritage, medical anthropology, and a host of international development issues.

At the heart of our program is a strong commitment to employ anthropological theory to engage contemporary relevant issues with focused research for communities. While some that are awarded a Ph.D. in Anthropology from University of Montana will look toward teaching careers, a goal of the program is to produce applied anthropologists who will serve in government agencies, nongovernmental organizations (NGOs), tribal and ethnic associations, and businesses.

## Doctor of Philosophy - Anthropology - Cultural Heritage and Applied Anthropology Option

### College of Humanities & Sciences

**Required Credits:** 60 (30 + 30 from M.A.)

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## Degree Requirements

## University Of Montana

The General Option requires coursework, a reviewed portfolio, a comprehensive examination, and a defended dissertation. The faculty expects completion of the Ph.D. within three years of earning the master's degree. All students entering the Ph.D. program must have the equivalent of an M.A. degree before they can proceed to Ph.D. status. For students accepted into the program with only an undergraduate degree, they must complete the requirements of an M.A. degree prior to moving into the Ph.D. program. Students initially accepted into the M.A. program can continue into the Ph.D. program, but they must complete the M.A. degree prior to continuing; those students must also apply for the Ph.D. program during the regular application cycle (even though they are extant M.A. students).

The Cultural Heritage Studies and Historical Anthropology Ph.D. program requires coursework, a reviewed portfolio, a comprehensive examination, and a defended dissertation. The faculty expects completion of the Ph.D. within three years of earning the masters degree.

### Coursework

Students are expected to complete the following course requirements:

- A total of 30 credits beyond those required for the MA degree (total of at least 60 credits post bachelors degree).
- The core course sequence consisting of ANTY 600, 601, and 602.
- At least nine credits in research (ANTY 697) and/or dissertation (ANTY 699). Students may apply up to 10 credits of ANTY 593/597/599 or the equivalent and 10 credits of ANTY 697/699 or the equivalent toward the 60 post-baccalaureate credits required for the degree. After students have earned a M.A. degree they may not enroll in ANTY 593/597/599.



## Applied Science

The Bachelor of Applied Science (BAS) degree at the University of Montana (UM) is designed for individuals who have completed an Associate of Applied Science (AAS) degree and want to pursue additional education to strengthen their planned or previous training and improve career advancement opportunities. As such, students pursuing the BAS build a tailored degree plan that suits their specific academic and professional goals.

Up to 50 technical credits earned as part of an AAS degree may count towards the total credits required for the BAS. A maximum of 20 technical credits, on the other hand, may be counted in the total number of credits required for the other baccalaureate degrees at UM (i.e. Bachelor of Arts and Bachelor of Science degrees).

Any courses taken as part of the AAS that can count towards UM General Education Requirements (e.g. certain writing, psychology, math, and communication courses) *are not* considered technical and, hence, are not included in this 50 technical credit maximum.

## BAS Degree Requirements

Students who have completed an AAS degree with at least a 2.50 cumulative GPA are eligible to pursue the BAS at UM. The AAS degree must be earned from a regionally accredited institution for higher education. The degree requirements for the BAS degree include completion of:

- A minimum of 127 total earned semester credits
  - 30 of the 127 total required must consist of an upper-division student tailored degree plan curriculum
  - 39 of the 127 total required must be upper-division; this total number includes all credits taken as part of the degree plan curriculum
- All UM General Education Requirements

## BAS Degree Plan

As part of the BAS curriculum, students must develop a degree plan. Due to the nature of the BAS, many plans are interdisciplinary in nature (i.e. consist of courses from multiple disciplines).

It is important to understand that the BAS degree does not identify a specific discipline major. Even though some plans may consist of courses from one discipline (e.g. communication studies, psychology, geology), the student is NOT a Communication Studies, Psychology, or Geology major. Hence, the BAS student's transcript and diploma will not indicate a specific major.

## BAS Program Process

- Complete Student Information and Goals form and email to the Academic Advising Center (contact information below)

## University Of Montana

- A BAS advisor will review the form and contact you
- Discuss BAS with BAS advisor
  - If BAS is selected, apply for admission to BAS Program
- Build initial draft of degree plan using Student Degree Plan form
- Make a one-on-one advising appointment with BAS advisor
  - Submit and review first draft of degree plan
  - Discuss creating a degree plan committee
- Contact and meet with potential degree plan committee members
- Finalize degree plan and have all committee members sign the Degree Plan Curriculum Approval form

NOTE: All forms are located on the BAS Degree Forms & Documents webpage.

## BAS Contact Information

To ask general questions, individuals may contact the Missoula College Academic Advising Center at [AcademicAdvisingCenter@umontana.edu](mailto:AcademicAdvisingCenter@umontana.edu).

## Undergraduate Degree

- Bachelor of Applied Science

## Bachelor of Applied Science

### *Missoula College Academic Advising Center*

The Bachelor of Applied Science (B.A.S.) degree at the University of Montana (UM) is designed for individuals who have completed an Associate of Applied Science (AAS) degree with a 2.50 grade point average at a regionally accredited institution. (The Missoula College section of the University of Montana-Missoula catalog identifies Associate of Applied Science degree programs offered at The University of Montana.) Individuals pursuing the B.A.S. are those who are seeking additional education to strengthen their planned or previous training and improve career advancement opportunities.

As part of the B.A.S. curriculum, students must develop a degree plan tailored to their academic and professional goals. Due to the nature of the B.A.S., many plans are interdisciplinary in nature (i.e. consist of courses from multiple disciplines). Students initially meet with a B.A.S. advisor at Missoula College for assistance in developing their degree plan curriculum. After drafting their plan, students create a degree plan committee that consists of faculty members from disciplines represented in the plan. This committee provides final approval of the plan.

Bachelor of Applied Science students must meet all the University of Montana requirements for graduation. Up to 50 technical credits from an accredited A.A.S. program will count toward the 127 total credits required for graduation.

Any courses taken as part of the A.A.S. that can count towards UM General Education Requirements (e.g. certain writing, psychology, math, and communication courses) *are not* considered technical and, hence, are not included in this 50 technical credit maximum.

It is important to understand that the B.A.S. degree does not identify a specific discipline major. Even though some plans may consist of courses from one sole discipline, the student is NOT a major in that discipline. Hence, the B.A.S. student's transcript and diploma will not indicate a specific major or concentration area.

Although students submit their application for admission to and are initially advised through Missoula College, B.A.S. students are enrolled through the mountain campus and, as such, are assessed UM-Missoula tuition rates.

Students interested in pursuing the B.A.S. degree should review the Missoula College Academic Advising Center's B.A.S. webpage for informational resources and to learn how to request an initial advising appointment.

## Bachelor of Applied Science - Applied Science

### College of Humanities & Sciences

**Degree Specific Credits:** 127

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Mathematics	3-4
Perspectives	27
Expressive Arts (A)	
Literary & Artistic Studies (L)	
Historical & Cultural Studies (H)	
Social Sciences (S)	
Ethical & Human Values (E)	
Democracy and Citizenship (Y)	
Cultural and International Diversity (X)	
Natural Sciences (N)	
Lower-Division Approved Writing Course	
Writing Skills	6
Statistics/Foreign Language	3-10
Upper-Division Credit Requirement	39
Upper-Division Writing	3
AAS Degree Credits	38-50
Total Hours	119-139

## Mathematics

**Rule:** Any Mathematics course level 104 or higher (excluding M 111).

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

## University Of Montana

Minimum Required Grade: C-

3-4 Total Credits Required

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### Perspectives

**Rule:** A minimum of 3 credits towards each Perspective Category is required, except Natural Sciences.

**Note:** Some courses satisfy multiple Perspectives or GER Categories. Some courses included in your specific degree plan may overlap with Perspective or other GER categories; visit with your advisor for more information.

Minimum Required Grade: C-

27 Total Credits Required

Expressive Arts (A)

**Rule:** A minimum of three credits is required.

Literary & Artistic Studies (L)

**Rule:** A minimum of three credits is required.

Historical & Cultural Studies (H)

**Rule:** A minimum of three credits is required.

Social Sciences (S)

**Rule:** A minimum of three credits is required.

Ethical & Human Values (E)

**Rule:** A minimum of three credits is required.

Democracy and Citizenship (Y)

**Rule:** A minimum of three credits is required.

Cultural and International Diversity (X)

**Rule:** A minimum of three credits is required.

Natural Sciences (N)

**Rule:** A minimum of six credits is required. At least one course must have a laboratory component.

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### Writing Skills

**Rule:** Both WRIT 101 AND an Approved Writing Course are required.

## University Of Montana

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

Minimum Required Grade: C-

6 Total Credits Required

WRIT 101

**Rule:** Take 1 of the courses below.

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	
Total Hours		3

Minimum Required Grade: C-

Lower-Division Approved Writing Course

**Rule:** Any course designated as an Approved Writing Course during semester it's taken.

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## Foreign Language

**Rule:** Foreign Language or Statistics Course

Minimum Required Grade: C-

3-10 Total Credits Required

Statistics Course

**Rule:** Successful completion of 1 course from the list below.

**Note:** Prerequisites apply for all courses listed below; some courses from this list are major-restricted. Other baccalaureate major-specific Symbolic Systems may be used in lieu of course list above; speak with your advisor for more information.

CODE	TITLE	HOURS
Select one of the following:		3-4
M 133	Geometry and Measurement for Elementary School Teachers	
M 162	Applied Calculus	
M 171	Calculus I	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

Foreign Language

**Rule:** Successful completion of first-year sequence of a Modern and Classical Language (MCLL).

**Note:** A first-year sequence usually consists of courses numbered 101 & 102 (5 credits each) for most catalog-approved languages, though some exceptions to this course numbering and sequencing apply. Depending on the language, students may take a placement test to demonstrate proficiency to receive non-credit exemption from this requirement. Refer to the General Education Requirements section of this catalog and speak with your advisor for more information.

## Upper-Division Credit Requirement

**Rule:** 39 upper-division courses required for UM GERs. At least 30 of the 39 upper-division credits must be from the degree plan.

39 Total Credits Required

## Upper-Division Writing

**Rule:** At least one upper-division writing course is required for UM GERs.

**Note:** This course may be included as part of the student's degree plan or total Upper-Division Credits.

3 Total Credits Required

## AAS Degree Credits

## University Of Montana

**Rule:** Up to 50 technical credits earned from AAS may be counted towards the 127 required for the BAS.

Minimum Required Grade: C-

38-50 Total Credits Required



## Biological Sciences

### Creagh Breuner, Associate Dean

The Division of Biological Sciences has undergraduate and graduate programs representing the full range of the biological sciences. The Division offers Bachelor's degrees in:

- Biology (with a broad array of formal concentrations described in more detail below)
- Medical Laboratory Science
- Microbiology, including microbial ecology
- Wildlife Biology (a cooperative program administered by the College of Forestry and Conservation)
- Biochemistry (an interdepartmental degree administered by the Chemistry Department)
- Neuroscience (an interdepartmental degree with the Psychology Department)

The Division also advises students in pre-health sciences and offers a series of summer field courses at the University's Flathead Lake Biological Station, a year-round academic center for the ecological sciences located 85 miles north of Missoula near Kalispell and Glacier National Park. The Division is one of the leading research units in the University. Research programs in the Division provide abundant opportunities for students to enhance their educational experience by participating in mentored research. Several sources of funding are available to support undergraduate student research, and the Division participates in the University of Montana Conference on Undergraduate Research each spring.

### **Bachelor of Science Degrees:**

**Biology B.S.:** Provides a solid foundation in core areas of the biological sciences and in supporting physical sciences and mathematics. Several concentrations are available within the B.S. biology degree:

- **Cellular and Molecular Biology:** For students interested in the cellular and molecular aspects of biology, and for students interested in health-related professions.
- **Ecology and Organismal Biology:** For students interested in the biology of organisms (plants and animals), populations or communities, and for students interested in veterinary school.
- **Field Ecology:** For students interested in field-based ecology. Students with this option spend one or two summers taking field courses at the Flathead Lake Biological Station.
- **Genetics and Evolution:** For students interested in all aspects of genetics, as well as evolutionary biology, and for students interested in health-related professions.
- **Human Biological Sciences:** Provides a strong background in the biological sciences for students interested in pursuing further study in a health sciences professional program.

**Microbiology B.S.:** Microbiology is the study of microorganisms, including bacteria, yeasts, molds, viruses, protozoa and other microscopic parasites. The Bachelor's degree in Microbiology is offered as a general degree or with a concentration in microbial ecology. The general concentration emphasizes microbial structure, function, and interactions and relationships with humans. The microbial ecology concentration emphasizes microbial structure, function, and interactions and relationships with the environment and other organisms.

## University Of Montana

**Medical Laboratory Science B.S.:** Medical Laboratory Science or clinical laboratory science is a professional program with a combined study of chemistry, physiology and microbiology. A medical laboratory scientist performs chemical, microscopic, and microbiological procedures used in the diagnosis, study and treatment of human disease. Medical laboratory scientists are in high demand in hospitals, clinical labs, research institutions and government health departments. Board certification is required for clinical practice. To become certified, a student, after satisfying the minimum course requirements, completes a clinical practicum of at least 12 consecutive months in a school of medical laboratory science accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). After completing a clinical practicum and passing the American Society for Clinical Pathology (ASCP) Board of Certification examination, the student is certified as a Medical Laboratory Scientist [MLS(ASCP)].

The University of Montana has two coursework tracks for the Medical Laboratory Science B.S. degree. The 3+1 track includes the practicum at one of our affiliated programs as part of the degree, while the practicum is not included in the 4+1 track.

### **Bachelor of Arts Degrees:**

**Biology B.A.:** Two concentrations are available for the Biology B.A.:

- **Natural History:** For students who would like to combine basic natural history and biological sciences with another field such as art, journalism, or creative writing.
- **Biological Education and General Sciences Broadfield:** Two separate options designed for students interested in a career teaching biology or all sciences at the secondary (middle or high school) level.

Degree requirements for all majors and courses are described below (see the College of Forestry and Conservation for information about Wildlife Biology; the Biochemistry Program in the College of Humanities and Sciences for information about Biochemistry; the Psychology Program in the College of Humanities and Sciences for information about Neuroscience).

The Division of Biological Sciences is committed to providing coursework and experiences for non-science majors. The world faces many problems and opportunities that include significant biological components. Courses for non-science majors have the goal of fostering understanding of the process of science and enhancing biological knowledge as it relates to environmental, medical, social, and other issues. The Division offers courses designed specifically for non-majors: Microbiology for Health Sciences, Introductory Ecology, Survey of Montana Wildlife and Habitats, and others.

## Undergraduate

- Biology B.A., Natural History Concentration
- Biology B.A., Biological Education Concentration
- Biology B.A., Teacher Preparation General Science Broadfield Concentration
- Biology B.S., Cellular & Molecular Biology Concentration
- Biology B.S., Ecology and Organismal Biology Concentration
- Biology B.S., Field Ecology Concentration
- Biology B.S., Genetics and Evolution Concentration

## University Of Montana

- Biology B.S., Human Biological Sciences Concentration
- Medical Laboratory Science B.S.
- Microbiology B.S.
- Microbiology B.S., Microbial Ecology Concentration

## Undergraduate Minors

- Biology
- Microbiology

## Biology B.A. - Biological Education

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - Biology; Biological Education Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 68-70

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** This concentration provides students with coursework in Biology and related sciences and mathematics needed to be certified by the State of Montana to teach secondary Biology (in middle and high school). This concentration is appropriate for students interested in teaching Biology in a larger, more urban school. In order to be licensed to teach secondary Biology, students must be admitted to the Teacher Education Program through the Phyllis J. Washington College of Education.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required by the Biological Education Concentration	10
Plant-Based Organismal Course Requirement	4-5
Animal-Based Organismal Course Requirement	3-4
Required Courses Outside of the Major	31
Mathematics - Calculus	
Mathematics - Statistics	
Chemistry	
Physics	
Environmental Geosciences	
Education	
Advanced College Writing Requirement	3
Secondary Teaching Licensure	
Total Hours	68-70

### Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required by the Biological Education Concentration

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
Total Hours		10

Minimum Required Grade: C-

### Plant-Based Organismal Course Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
BIOO 320	General Botany	
or		
BIOO 433	Plant Physiology	
and BIOO 434	Plant Physiology Lab	
Total Hours		4-5

Minimum Required Grade: C-

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### Animal-Based Organismal Course Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
BIOB 301	Developmental Biology	
BIOE 403	Comparative Vertebrate Anatomy	
BIOB 435	Comparative Animal Physiology	
Total Hours		3-4

Minimum Required Grade: C-

### Required Courses Outside of the Major

#### Mathematics - Calculus

Note: Students should choose M 171 if they plan to take additional calculus courses or if they plan a double major or minor in a field that requires more calculus (e.g. astronomy, math, physics, biochemistry, computer science).

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

**Mathematics - Statistics**

		Course List
CODE	TITLE	HOURS
<b>Complete the following course:</b>		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

**Chemistry**

		Course List
CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
CHMY 485	Laboratory Safety	1
Total Hours		11

Minimum Required Grade: C-

**Physics**



		Course List
CODE	TITLE	HOURS
<b>Complete one of the following Physics courses:</b>		5
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc (requires M 171)	
Total Hours		5

Minimum Required Grade: C-

**Environmental Geosciences**

		Course List
CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
GEO 105N	Oceanography	3
or GEO 103N	Introduction to Environmental Geology	
Total Hours		3

Minimum Required Grade: C-

**Education**

**Note:** The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Science" for 3 credits is required for the Biological Education option.

		Course List
CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Advanced College Writing Requirement

		Course List
CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 371	Gen Ecology Lab (equiv to 271)	
and		
BIOO 434	Plant Physiology Lab	
or BIOO 320	General Botany	
Total Hours		

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach Biology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Biology B.A. - Natural History

### Bachelor of Arts - Biology; Natural History Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 75

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Natural History concentration is designed for students who seek an interdisciplinary science program. This concentration is not research-oriented and is not considered a preparatory program for traditional research-based graduate programs. It is, however, designed for students seeking careers in environmental education, science writing or illustration, natural history or wildlife film-making, or natural history centers or museums. There is enough latitude in the requirements to allow for a minor or even a double major in a related field of interest (e.g. journalism, art, media arts, etc.).

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Course List		
CODE	TITLE	HOURS
Biology/Microbiology Lower-Division Core		17
Upper-Division Core Courses Required by Natural History Concentration		24
Required Courses Outside of the Major		34
Chemistry and Geology		
Cognate Electives		
Total Hours		75

### Biology/Microbiology Lower-Division Core

## University Of Montana

**Note:** The lower-division core should be completed before attempting most upper-division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

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## Upper-Division Core Courses Required by Natural History Concentration

University Of Montana

Course List		
CODE	TITLE	HOURS
Complete one of the following Ecology courses:		5
BIOE 342	Field Ecology	
BIOE 370 & BIOE 371	General Ecology and Gen Ecology Lab (equiv to 271)	
Complete all of the following courses:		
BIOE 406	Behavior & Evolution	3
BIOO 320	General Botany	5
BIOO 335	Rocky Mountain Flora	3
BIOO 462	Entomology	4
Complete one of the following courses:		4
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
Total Hours		24

Minimum Required Grade: C-

## Required Courses Outside of the Major

Chemistry and Geology

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
Chemistry:		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
Geology:		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		14

Minimum Required Grade: C-

Cognate Electives

**Note:**

- Students should plan on taking M 121 or higher level M course (prerequisite for BIOB 272 and GER math requirement) and STAT 216 (pre- or co-requisite for BIOE 371).
- Students interested in combining the Natural History concentration with another subject area may, with the advisor's permission, substitute 10 credits in English - writing, journalism, photography, art, modern & classical language, business management, or other appropriate field.

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Course List		
CODE	TITLE	HOURS
Complete 20 credits in the following disciplines, with a maximum of 10 credits in any one discipline:		20
Anthropology (ANTY)		
Astronomy (ASTR)		
Chemistry (CHMY) - excluding CHMY 121N, 123, and 124		
Geography (GPHY)		
Geology (GEO) - excluding GEO 101N and 102N		
Forestry/Natural Resource Management (FORS/NRSM)		
Mathematics/Statistics (M/STAT)		
Physics (PHSX)		
Wildlife Biology (WILD)		
Total Hours		20

Minimum Required Grade: C-

## Biology B.A. - Teacher Preparation General Science Broadfield

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - Biology, Teaching General Science Broadfield Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 73-75

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** This concentration provides students with coursework in Biology, Chemistry, Physics, Earth Sciences and Mathematics needed to be certified by the State of Montana in broad-field science. This allows students to teach secondary sciences - Biology, Chemistry, Physics, and Earth Science (in middle and high schools). This concentration is appropriate for students interested in teaching science in smaller, more rural schools. In order to be licensed to teach secondary science, students must be admitted to the Teacher Education Program through the Phyllis J. Washington College of Education and Human Sciences.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary



## University Of Montana

Lower-Division Courses in the Content Areas	53
Biology Content Courses	
Chemistry Content Courses	
Earth Sciences Content Courses	
Earth Sciences Content Courses - Environmental Geosciences	
Physics Content Courses	
Upper Division Content Courses	5
Required Courses Outside of the Major	12
Mathematics - Calculus	
Mathematics - Statistics	
Education Course	
Advanced College Writing Requirement	3-5
Secondary Teaching Licensure	
Total Hours	73-75

### Lower-Division Courses in the Content Areas - Biology, Chemistry, Earth Sciences, and Physics

**Note:** A minimum of 10 credits is required in each of the four following content areas.

#### **Biology Content Courses**

**Note:** An AP Biology score of 3 will substitute for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

**Chemistry Content Courses**

**Note:** CHMY 141N/CHMY 142N & CHMY 143N/CHMY 144N should be completed before attempting CHMY 123.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 485	Laboratory Safety	1
Total Hours		15

Minimum Required Grade: C-

**Earth Sciences Content Courses**

**Note:** ASTR 132N/ASTR 135N are NOT acceptable substitutes for ASTR 131N/ASTR 134N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ASTR 131N	Planetary Astronomy	3
ASTR 134N	Planetary Astronomy Lab	1
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		8

Minimum Required Grade: C-

**Earth Sciences Content Courses - Environmental Geosciences**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GEO 103N	Introduction to Environmental Geology	
GEO 105N	Oceanography	
Total Hours		3

Minimum Required Grade: C-

**Physics Content Courses**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Upper-Division Content Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
Total Hours		5

Minimum Required Grade: C-

## Required Courses Outside of the Major

### Mathematics - Calculus

**Note:** Students should choose M 171 if they plan to take additional calculus courses or if they plan a double major or minor in a field that requires more calculus (e.g. astronomy, math, physics, biochemistry, computer science).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Mathematics - Statistics

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

### Education

**Note:** The course number EDU 497 covers many different teaching methods courses. The section of EDU 497 entitled "Methods: 5 - 12 Science" is required for the General Science Broadfield Concentration.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To meet the Advanced College Writing Requirement, Biology students must complete 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The General Science Broadfield requires one 2/3 writing course (BIOE 371). The advanced college writing requirement is completed with one additional course, chosen from any of the following. The recommended course is B100 434 (taken with B100 433), which is required for the Teaching Biology endorsement.

### 1/3 Advanced Writing Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

## University Of Montana

Minimum Required Grade: C-

### Complete Advanced Writing Course

CODE	TITLE	HOURS
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-

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### Secondary Teaching Licensure

**Note:** For endorsement to teach general science, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## **Biology B.S. - Cellular and Molecular Biology**

### **Bachelor of Science - Biology; Cellular & Molecular Biology Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 83-87

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Cellular and Molecular Biology is the study of cellular, molecular, and physiological aspects of Biology. This concentration is a graduate prep program and is for students interested in academia or research jobs in private or government laboratories. It is also an excellent concentration for pre-medical sciences students.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**



## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required by Cellular & Molecular Biology Concentration	20
Additional Upper-Division Major Courses Required for the Cellular & Molecular Biology Concentration	8-12
Disease Elective	
Additional Upper-Division Depth Courses - Lecture	
Additional Upper-Division Depth Courses - Laboratory	
Required Courses Outside of the Major	38
Mathematics - Calculus	
Chemistry	
Additional Depth in Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	83- 87

### Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper-division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required by Cellular & Molecular Biology Concentration

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BIOB 301	Developmental Biology	3
BIOB 375	General Genetics	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
Total Hours		20

Minimum Required Grade: C-

### Additional Upper-Division Major Courses Required for the Cellular & Molecular Biology Concentration

University Of Montana

**Rule:** Complete the following subcategories.

**Disease Elective**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 410	Immunology	
BIOM 435	Virology	
Total Hours		3

Minimum Required Grade: C-

**Additional Upper-Division Depth Courses - Lecture**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
BIOB 468	Endocrinology	
BIOB 483	Phylogenics and Evolution	
BIOB 486	Genomics	
BIOB 435	Comparative Animal Physiology	
BIOM 410	Microbial Genetics	
BIOM 420	Host-Microbe Interactions	
BIOM 450	Microbial Physiology	
BIOO 433 & BIOO 434	Plant Physiology and Plant Physiology Lab	
Total Hours		3-4

Minimum Required Grade: C-

**Additional Upper-Division Depth Courses - Laboratory**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		2-5
BCH 486	Biochemistry Research Lab	
BIOB 411	Immunology Laboratory	
BIOH 447	Genes & Development Lab	
BIOM 411	Exprmntl Microbial Genetcs Lab	
BIOM 451	Microbial Physiology Lab	
BIOM 490 or BIOB 490 or BCH 490	Adv Undergrad Research	
Total Hours		2-5

Minimum Required Grade: C-

## Required Courses Outside of the Major

**Rule:** Complete the following subcategories.

### Mathematics - Calculus

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		20

Minimum Required Grade: C-

**Additional Depth in Chemistry**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
CHMY 311	Analytical Chem-Quant Analysis	
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	
Total Hours		4

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biology students complete 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Cellular & Molecular Biology concentration requires two 1/3 writing courses: BCH 482 and BIOB 425. The Advanced College Writing Requirement is completed with one additional course, chosen from any of the following.

Minimum Required Grade: C-

### 1/3 Advanced Writing Courses

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

**Complete Advanced Writing Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-



## **Biology B.S. - Ecology and Organismal Biology**

### **Bachelor of Science - Biology; Ecology and Organismal Biology Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 71-85

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Ecology and Organismal Biology concentration is for students interested in the biology of organisms (plants or animals) or the biology of populations or communities. Course offerings include those from organismal biology, ecology, evolutionary biology, and conservation biology. This concentration is a graduate prep program, and it is designed for students interested in academia or employment with government or environmental consulting agencies. This concentration is also an excellent choice for pre-veterinary students.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required by Ecology & Organismal Biology Concentration	5
Additional Upper-Division Courses Required for the Ecology & Organismal Biology Concentration	21
Organismal Course Requirement	
-Ology Course Requirement	
Specialized Ecology Course Requirement	
Evolution Course Requirement	
Required Courses Outside of the Major	28-42
Mathematics - Calculus	
Mathematics - Statistics	
Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	71-85

### Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper-division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required by Ecology & Organismal Biology Concentration

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		5
BIOE 370 & BIOE 371	General Ecology and Gen Ecology Lab (equiv to 271)	
BIOE 342	Field Ecology (taken at the Flathead Lake Biological Station)	
Total Hours		5

Minimum Required Grade: C-

### Additional Upper-Division Courses Required for the Ecology & Organismal Biology Concentration

**Rule:** Complete a minimum of 21 credits of upper-division BIOB, BIOE, BIOH, BIOL, BIOM, BIOO, or BCH course, with at least one course from each of the following subcategories. Other recommended courses include BCH 380 or BCH 480-BCH 482. 21 total credits required.

#### Organismal Course Requirement

CODE	TITLE	HOURS
<b>Complete at least one organismal course (lab must also be taken, if available) from the following list:</b>		3-4
BIOB 301	Developmental Biology	
BIOB 375	General Genetics	
BIOB 468	Endocrinology	
BIOE 403	Comparative Vert Anatomy	
BIOB 435	Comparative Animal Physiology	
BIOO 433 & BIOO 434	Plant Physiology and Plant Physiology Lab	
Total Hours		3-4

Minimum Required Grade: C-

**-Ology Course Requirement**

CODE	TITLE	HOURS
<b>Complete at least one course with a focus on a group of organisms (lab must also be taken, if available) from the following list:</b>		3-5
BIOM 360 & BIOM 361	General Microbiology and General Microbiology Lab (equiv to 260)	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOO 320	General Botany	
BIOO 335	Rocky Mountain Flora	
BIOO 340	Biology and Mgmt of Fishes	
BIOO 462	Entomology	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
Total Hours		3-5

Minimum Required Grade: C-

**Specialized Ecology Course Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-5
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
BIOE 448	Terrestrial Plant Ecology	
BIOM 415	Microbial Dvrsty Eclgy & Evltn	
BIOM 460	Ecology of Infectious Diseases	
WILD 470	Conserv of Wildlife Populatns	
<b>Flathead Lake Biological Station courses (summer only):</b>		
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
Total Hours		3-5

Minimum Required Grade: C-

**Evolution Course Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 480	Conservation Genetics	
BIOB 483	Phylogenics and Evolution	
BIOB 486	Genomics	
BIOE 406	Behavior & Evolution	
BIOE 485	Plant Evolution	
BIOM 420	Host-Microbe Interactions	
Total Hours		3

Minimum Required Grade: C-

## Required Courses Outside of the Major

### Mathematics - Calculus

**Note:** Students should choose M 171 if they plan to take additional calculus courses if they plan to double major or minor in a field that requires more calculus (e.g. astronomy, math, physics, biochemistry, computer science).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Mathematics - Statistics

**Note:** Students should choose the full year of statistics for graduate preparation in ecology.

CODE	TITLE	HOURS
<b>Complete either one semester or a full year of statistics from the following:</b>		4-8
<b>One Semester:</b>		
STAT 216	Introduction to Statistics	
<b>Full Year:</b>		
STAT 451 & STAT 452	Statistical Methods I and Statistical Methods II	
STAT 457 & STAT 458	Computer Data Analysis I and Computer Data Analysis II	
Total Hours		4-8

Minimum Required Grade: C-

### Chemistry

#### Notes:

- Students who begin in the advanced chemistry sequence may substitute those courses for introductory sequence courses at the discretion of the major advisor.
- Students should choose the advanced sequence for graduate preparation in organismal biology or pre-veterinary medicine.



University Of Montana

CODE	TITLE	HOURS
<b>Complete a sequence of general and organic chemistry:</b>		10-20
<b>Introductory Chemistry (10 credits):</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
<b>Advanced Chemistry (20 credits):</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
Total Hours		10-20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biology students take 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Ecology & Organismal Biology concentration requires one 2/3 writing course (BIOE 371). The Advanced College Writing Requirement is completed with one more course, chosen from any of the following.

### 1/3 Advanced Writing Courses

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

# University Of Montana

Minimum Required Grade: C-

## Complete Advanced Writing Course

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-

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University Of Montana

## **Biology B.S. - Field Ecology**

### **Bachelor of Science - Biology; Field Ecology Concentration**

College of Humanities & Sciences

**Degree Specific Credits:** 71-84

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Field Ecology Concentration is for students interested in field-based ecology. Students with this concentration spend one or two summers taking field courses at the Flathead Lake Biological Station. This concentration is a graduate prep program, and is for students interested in academia or employment at a governmental, private, or non-profit agency.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required for the Field Ecology Concentration	5
Additional Upper Division Major Courses Required for the Field Ecology Concentration	8
Evolution Course Requirement	
-Ology Course Requirement	
Ecology Requirement at the Flathead Lake Biological Station	13
Aquatic Emphasis	
Terrestrial Emphasis	
Required Courses Outside of the Major	28-42
Mathematics - Calculus	
Mathematics - Statistics	
Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	71-85

### Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper-division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required for the Field Ecology Concentration

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		5
BIOE 342	Field Ecology (at Flathead Lake Biological Station)	
BIOE 370 & BIOE 371	General Ecology and Gen Ecology Lab (equiv to 271)	
Total Hours		5

Minimum Required Grade: C-

### Additional Upper-Division Major Courses Required for the Field Ecology Concentration

**Rule:** Complete a minimum of 8 credits of upper-division Biology or Microbiology (BIOB, BIOE, BIOH, BIOL, BIOM, or BIOO), with at least one course from each of the following subcategories. 8 total credits required.

#### Evolution Course Requirement

CODE	TITLE	HOURS
<b>Complete at least one evolutionary biology course from the following list:</b>		<b>3</b>
BIOB 480	Conservation Genetics	
BIOB 483	Phylogenics and Evolution	
BIOB 486	Genomics	
BIOE 406	Behavior & Evolution	
BIOE 485	Plant Evolution	
BIOM 420	Host-Microbe Interactions	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**-Ology Course Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3-5</b>
Biom 360 & BIOM 361	General Microbiology and General Microbiology Lab (equiv to 260)	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOO 320	General Botany	
BIOO 335	Rocky Mountain Flora	
BIOO 340	Biology and Mgmt of Fishes	
BIOO 462	Entomology	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
Total Hours		<b>3-5</b>

Minimum Required Grade: C-



## Ecology Requirement at the Flathead Lake Biological Station

**Rule:** Complete either the Aquatic Emphasis or the Terrestrial Emphasis.

### Aquatic Emphasis

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 440	Conservation Ecology	3
BIOE 451	Landscape Ecology	3
BIOB 494	Seminar in Biology	1
<b>Complete 2 of the following courses:</b>		6
BIOE 400	Aquatic Microbial Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
Total Hours		13

Minimum Required Grade: C-

### Terrestrial Emphasis

CODE	TITLE	HOURS
<b>If choosing the Terrestrial Emphasis, complete all of the following courses:</b>		
BIOE 416	Alpine Ecology	3
BIOE 440	Conservation Ecology	3
BIOE 451	Landscape Ecology	3
BIOE 458	Forest and Fire Ecology	3
BIOB 494	Seminar in Biology	1
Total Hours		13

Minimum Required Grade: C-

## Required Courses Outside of the Major

**Mathematics - Calculus**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

**Mathematics - Statistics**

CODE	TITLE	HOURS
<b>Complete either one semester or a full year of statistics from the following:</b>		4-8
<b>One Semester:</b>		
STAT 216	Introduction to Statistics	
<b>Full Year:</b>		
STAT 451 & STAT 452	Statistical Methods I and Statistical Methods II	
STAT 457 & STAT 458	Computer Data Analysis I and Computer Data Analysis II	
Total Hours		4-8

Minimum Required Grade: C-

**Chemistry**

**Notes:**

- Students who begin in the advanced chemistry sequence may substitute those courses for introductory sequence courses at the discretion of the major advisor.

University Of Montana

CODE	TITLE	HOURS
<b>Complete a sequence of general and organic chemistry:</b>		10-20
<b>Introductory Chemistry (10 credits):</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
<b>Advanced Chemistry (20 credits):</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
Total Hours		10-20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biology students take 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Field Ecology concentration requires BIOE 371 or BIOE 342 (both 2/3 writing courses). The Advanced College Writing Requirement is completed with one additional course, chosen from any of the following.

### 1/3 Advanced Writing Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

**Complete Advanced Writing Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interations	3

Minimum Required Grade: C-

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## **Biology B.S. - Genetics and Evolution**

### **Bachelor of Science - Biology; Genetics and Evolution Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 72-90

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Genetics and Evolution concentration is for students interested in genetics and evolutionary biology, including molecular genetics, population genetics, ecological genetics, and genomics. This concentration is a graduate prep program, and is for students interested in academia or research jobs in private or government laboratories. It is also an excellent concentration for students interested in a professional health program such as medical school or a genetic counseling graduate program.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required by the Genetics & Evolution Concentration	11
Additional Upper-Division Courses Required for the Genetics & Evolution Concentration	16-20
Biochemistry	
Genetics/Evolution Depth Courses	
Physiology Requirement	
Required Courses Outside of the Major	28-42
Mathematics - Calculus	
Mathematics - Statistics	
Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	72-90

### Biology/Microbiology Lower-Division Core

**Note:** The lower division core should be completed before attempting most upper division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required by the Genetics & Evolution Concentration

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 375	General Genetics	3
BIOB 486	Genomics	3
BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
Total Hours		11

Minimum Required Grade: C-

### Additional Upper-Division Courses Required for the Genetics & Evolution Concentration

#### Biochemistry

**Note:** If introductory chemistry is completed, then BCH 380 must be taken. Either BCH 380 or BCH 480-BCH 482 may be taken if the advanced chemistry sequence is completed.

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4-6
BCH 380	Biochemistry	
BCH 480 & BCH 482	Advanced Biochemistry I and Advanced Biochemistry II	
Total Hours		4-6

Minimum Required Grade: C-

**Genetics/Evolution Depth Courses**

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9-10
BIOB 480	Conservation Genetics	
BIOB 483	Phylogenics and Evolution	
BIOE 403	Comparative Vert Anatomy	
BIOE 406	Behavior & Evolution	
BIOE 485	Plant Evolution	
BIOH 447	Genes & Development Lab	
BIOM 410	Microbial Genetics	
BIOM 415	Microbial Diversity, Ecology & Evolution	
BIOM 420	Host-Microbe Interactions	
CSCI 451	Computational Biology	
Total Hours		9-10

Minimum Required Grade: C-

**Physiology Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses (labs must be taken if available):</b>		3-4
BIOB 425	Advanced Cellular & Molecular Biology	
BIOB 435	Comparative Animal Physiology	
BIOM 450 & BIOM 451	Microbial Physiology and Microbial Physiology Lab	
BIOO 433 & BIOO 434	Plant Physiology and Plant Physiology Lab	
Total Hours		3-4

Minimum Required Grade: C-

## Required Courses Outside of the Major

### Mathematics - Calculus

Note: Student should choose M 171 if they plan to take additional calculus courses or if they plan to double major or minor in a field that requires more calculus (e.g. astronomy, math, physics, biochemistry, computer science).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Mathematics - Statistics

CODE	TITLE	HOURS
<b>Complete either one semester or a full year of statistics from the following:</b>		4-8
<b>One Semester:</b>		
STAT 216	Introduction to Statistics	
<b>Full Year:</b>		
STAT 451 & STAT 452	Statistical Methods I and Statistical Methods II	
STAT 457 & STAT 458	Computer Data Analysis I and Computer Data Analysis II	
Total Hours		4-8

Minimum Required Grade: C-

### Chemistry

#### Notes:

- Students who begin in the advanced chemistry sequence may substitute those courses for introductory sequence courses at the discretion of the major advisor.
- Students should choose the advanced sequence for graduate preparation.

University Of Montana

CODE	TITLE	HOURS
<b>Complete a sequence of general and organic chemistry:</b>		10-20
<b>Introductory Chemistry (10 credits):</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
<b>Advanced Chemistry (20 credits):</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
Total Hours		10-20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biology students take 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Genetics & Evolution concentration requires one 2/3 writing course: BIOE 371. The Advanced College Writing Requirement is completed with one additional course, chosen from any of the following.

### 1/3 Advanced Writing Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

***Complete Advanced Writing Course***

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-

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## **Biology B.S. - Human Biological Sciences**

### **Bachelor of Science - Biology; Human Biological Sciences Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits:** 72-90

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Human Biological Sciences concentration is a pre-professional program for students planning careers in a health-related field. The following is a partial list of possible professions: physical therapy, medicine, dentistry, physician's assistant, alternative medicine, nutrition, and public health.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Core Courses Required by Human Biological Sciences Concentration	17
Additional Upper-Division Courses Required for the Human Biological Sciences Concentration	10-14
Biochemistry Requirement	
Microbiology Requirement	
Additional Depth in Human Biological Sciences	
Required Courses Outside of the major	28-42
Mathematics and Psychology	
Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	72-90

### Biology/Microbiology Lower Division Core

**Note:** The lower division core should be completed before attempting most upper division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Core Courses Required by Human Biological Sciences Concentration

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 301	Developmental Biology	3
BIOB 375	General Genetics	3
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	4
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	4
BIOM 360	General Microbiology	3
Total Hours		17

Minimum Required Grade: C-

### Additional Upper-Division Courses Required for the Human Biological Sciences Concentration

#### Biochemistry Requirement

**Note:** If introductory chemistry is completed, then BCH 380 must be taken. Either BCH 380 or BCH 480/BCH 480/BCH 482/BCH 482 may be taken if the advanced chemistry sequence is completed.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following sequences:</b>		4-6
<b>One Semester:</b>		
BCH 380	Biochemistry	
<b>Full Year:</b>		
BCH 480	Advanced Biochemistry I	
BCH 482	Advanced Biochemistry II	
Total Hours		4-6

Minimum Required Grade: C-

**Additional Depth in Human Biological Sciences**

University Of Montana

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6-8
BCH 486	Biochemistry Research Lab	
BIOB 410	Immunology	
BIOB 425	Advanced Cellular & Molecular Biology	
BIOB 435	Comparative Animal Physiology	
BIOB 468	Endocrinology	
BIOB 483	Phylogenics and Evolution	
BIOB 486	Genomics	
BIOB 499	Undergraduate Thesis	
BIOE 403	Comparative Vert Anatomy	
BIOE 406	Behavior & Evolution	
BIOH 405	Hematology	
BIOH 447	Genes & Development Lab	
BIOH 462	Principles Medical Physiology	
BIOM 402	Medical Bacteriology& Mycology	
BIOM 410	Microbial Genetics	
BIOM 420	Host-Microbe Interactions	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOM 435	Virology	
BIOM 450	Microbial Physiology	
Total Hours		6-8

Minimum Required Grade: C-

**Required Courses Outside of the Major**

## University Of Montana

Minimum Required Grade: C-

### Mathematics and Psychology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 162	Applied Calculus	4
or M 171	Calculus I	
PSYX 100S	Intro to Psychology	3
STAT 216	Introduction to Statistics	4
Total Hours		11

Minimum Required Grade: C-

### Chemistry

#### Notes:

- Students who begin in the advanced chemistry sequence may substitute those courses for introductory sequence courses at the discretion of the major advisor.
- If students plan to apply to a graduate or professional school such as medical or dental, they should plan to complete the advanced chemistry sequence. If they plan to pursue nursing or a graduate program in physical therapy, the introductory chemistry sequence is most likely sufficient. The advanced chemistry option is more flexible, and keeps more options open for future careers. Check the requirements of your intended professional program to help determine which sequence is most appropriate.

University Of Montana

CODE	TITLE	HOURS
<b>Complete a sequence of general and organic chemistry:</b>		10-20
<b>Introductory Chemistry (10 credits):</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
<b>Advanced Chemistry (20 credits):</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
Total Hours		10-20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc (require M 171 and M 172)	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biology students take 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Human Biological Sciences concentration does not require a specific advanced writing course.

### 1/3 Advanced Writing Courses



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

**Complete Upper-Division Writing Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-

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# Biology Minor

## Minor - Biology

College of Humanities & Sciences

**Degree Specific Credits:** 25

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Course List		
CODE	TITLE	HOURS
Biology/Microbiology Lower-Division Core		17
Upper-Division Biology Requirement for the Minor		8
Teaching Biology Track		
Total Hours		25

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### Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper division BIO- courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

## Upper-Division Biology Requirement for the Minor

**Note:** These eight credits may not include BIOC, BCH, or BIOM courses.

Course List		
CODE	TITLE	HOURS
Complete 8 credits in courses with the following rubrics:		8
BIOB		
BIOE		
BIOH		
BIOL		
BIOO		
Total Hours		8

Minimum Required Grade: C-

## Teaching Biology Track

# University Of Montana

## Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

## Upper-Division Core Courses Required by the Biology Teaching Track

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
Total Hours		5

Minimum Required Grade: C-

Required Content Courses Outside of the Major

*Mathematics - Calculus*

**Note:** Choose M 171, if you plan to take additional calculus courses, or if you plan a double major or minor in a field that requires more calculus (e.g. math, physics, biochemistry, computer science).

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete one of the following courses:		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Mathematics - Statistics

Course List		
CODE	TITLE	HOURS
Complete the following course:		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

### Chemistry

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 485	Laboratory Safety	1
Total Hours		9

Minimum Required Grade: C-

### Environmental Geosciences

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete one of the following courses:		3
GEO 103N	Introduction to Environmental Geology	
GEO 105N	Oceanography	
Total Hours		3

Minimum Required Grade: C-

### Education

**Note:** The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Science" is required for the Teaching Biology minor.

Course List		
CODE	TITLE	HOURS
Complete the following course:		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach biology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Medical Laboratory Science B.S.

## Bachelor of Science - Medical Laboratory Science

### College of Humanities & Sciences

**Degree Specific Credits:** 86 (4+1), 99 (3+1)

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** A Medical Laboratory Science degree prepares students to perform various chemical, histological, and microbial laboratory procedures used in the diagnosis, study, and treatment of disease. Students with this degree seek employment in hospital laboratories, physicians' offices, and health departments. For clinical practice, a student must be certified through the Board of Registry by completing a one-year clinical practicum.

## General Education Requirement

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Course List		
CODE	TITLE	HOURS
Lower-Division Biology Courses		8
Required Courses Outside the Major		8
Tracks		70-83
4 + 1 Track		
3 + 1 Track		
Advanced College Writing Requirement		
Total Hours		86-99

## Lower Division Biology Courses



## University Of Montana

**Note:** Either BIOB 160N (C- or better) or BCH 110/BCH 111 (C- or better) or BIOH 112 (B- or better) must be taken as a prerequisite for BIOB 260, unless a student has AP Biology credit.

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		8

Minimum Required Grade: C-

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## Required Courses Outside the Major

### Mathematics - Calculus

Course List		
CODE	TITLE	HOURS
Complete one of the following courses:		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

### Mathematics - Statistics

Course List		
CODE	TITLE	HOURS
Complete the following course:		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

---

## Medical Laboratory Science; Track: 4 + 1

**Note:** The 4+1 track is the more flexible option, in which students complete the four years of the Bachelor's degree on the UM campus. Students may apply to a clinical practicum program anywhere in the country.

### Required Major Courses for Medical Laboratory Science 4 + 1 Track

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BCH 380	Biochemistry	4
BIOB 410	Immunology	3
BIOB 411	Immunology Laboratory	2
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	4
BIOH 405	Hematology	3
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
BIOM 402	Medical Bacteriology & Mycology	3
BIOM 403	Medical Bacteriology & Mycology Lab	2
BIOM 407	Clinical Diagnosis	2
BIOM 408	Clinical Diagnosis Lab	1
BIOM 427	General Parasitology	2
BIOM 428	General Parasitology Lab	2
BIOM 435	Virology	3
Total Hours		36

Minimum Required Grade: C-

*Chemistry*

University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
CHMY 311	Analytical Chem-Quant Analysis	4
Total Hours		24

Minimum Required Grade: C-

*Physics*

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete one of the following Physics sequences:		10
Algebra- and Trigonometry-based Physics:		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
Calculus-based Physics:		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

### Medical Laboratory Science; Track: 3 + 1

**Note:** The 3+1 track is the faster option, as the clinical practicum year is part of the degree. Three years are spent on the UM campus, and then the clinical practicum year with the Montana University System Medical Laboratory Training program (or with one of our affiliated programs) is the fourth year of the Bachelor's degree. Note: this degree requires a total of 130 credits.

Required Major Courses for Medical Laboratory Science 3 + 1

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BCH 380	Biochemistry	4
BIOB 410	Immunology	3
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	4
BIOH 405	Hematology	3
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
BIOM 402	Medical Bacteriology & Mycology	3
BIOM 403	Medicl Bacteriolgy & Myclgy Lb	2
BIOM 427	General Parasitology	2
BIOM 428	General Parasitology Lab	2
BIOM 435	Virology	3
Total Hours		31

Minimum Required Grade: C-

### Required Professional Practicum

**Note:** The student must apply for the professional practicum to one of our affiliated programs during the autumn prior to enrollment. To be competitive for this practicum, a student must be in good academic standing with a minimum GPA of ~3.0, and demonstrate a commitment to the clinical laboratory profession. For more information, visit the Medical Laboratory Sciences website. Contact Dr. Mike Minnick to apply for the practicum.

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOH 470	Summer Clinical Laboratory	12
BIOH 471	Professional Training I	13
BIOH 472	Professional Training II	12
Total Hours		37

Minimum Required Grade: C-

### *Chemistry*

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
Total Hours		15

Minimum Required Grade: C-

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## Advanced College Writing Requirement

### **Rule:**

- Complete the equivalent of a full writing course (either three 1/3 writing courses or one 2/3 writing course + one 1/3 writing course or one complete writing course).
- To meet the Advanced College Writing Requirement, Medical Laboratory Science 4+1 students take BIOB 410 (a 1/3 writing course) and BIOB 411 (a 2/3 writing course).

## University Of Montana

- To meet the Advanced College Writing Requirement, Medical Laboratory Science 3+1 students take two 1/3 writing courses (BIOB 410 and BIOM 402). The Advanced College Writing Requirement is completed with one more course, chosen from any of the following. (BIOB 411 is recommended by clinical practicum programs).

### 1/3 Advanced Writing Courses

Course List		
CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

### 2/3 Advanced Writing Courses

University Of Montana

Course List		
CODE	TITLE	HOURS
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory (recommended)	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetics Lab	1
BIOM 499	Undergraduate Thesis	3-6

Minimum Required Grade: C-

Complete Advanced Writing Course

Course List		
CODE	TITLE	HOURS
BIOH 462	Principles Medical Physiology	3

Minimum Required Grade: C-



# Microbiology B.S.

## Bachelor of Science - Microbiology

College of Humanities & Sciences

**Degree Specific Credits:** 91

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Microbiology is the study of microorganisms including bacteria, fungi, viruses, and protozoa. This general microbiology concentration emphasizes microbial structure and function as well as interactions with humans. This is a graduate prep program and is appropriate for students interested in research careers in academia or private or government laboratories. It is also an excellent concentration for pre-medical sciences students.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Biology/Microbiology Lower-Division Core	17
Upper-Division Microbiology Core Courses	16
Additional Upper-Division Major Courses Required for Microbiology	16
Biochemistry	
Additional Upper-Division Depth Courses in Microbiology	
Required Courses Outside of the Major	42
Mathematics	
Chemistry	
Physics	
Advanced College Writing Requirement	
Total Hours	91

## Biology/Microbiology Lower-Division Core

**Note:** The lower-division core should be completed before attempting most upper-division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

## Upper-Division Microbiology Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
BIOM 410	Microbial Genetics	3
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 415	Microbial Dvrsty Eclgy & Evltn	3
BIOM 450	Microbial Physiology	3
BIOM 451	Microbial Physiology Lab	1
Total Hours		16

Minimum Required Grade: C-

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### Additional Upper-Division Courses Required for Microbiology

#### Biochemistry

CODE	TITLE	HOURS
<b>Complete either one semester or one year of Biochemistry courses:</b>		4-6
One Semester:		
BCH 380	Biochemistry	
One Year:		
BCH 480	Advanced Biochemistry I	
BCH 482	Advanced Biochemistry II	
Total Hours		4-6

Minimum Required Grade: C-

#### Additional Upper-Division Depth Courses in Microbiology

CODE	TITLE	HOURS
<b>Complete 10-12 credits from the following courses (labs must be taken if available). 10 credits if BCH 480-482 was taken; 12 credits if BCH 380 was taken.</b>		10-12
BIOB 410 & BIOB 411	Immunology and Immunology Laboratory	
BIOB 483	Phylogenics and Evolution	
BIOE 370	General Ecology	
BIOH 405	Hematology	
BIOM 402 & BIOM 403	Medical Bacteriology & Mycology and Medical Bacteriology & Mycology Lab	
BIOM 407 & BIOM 408	Clinical Diagnosis and Clinical Diagnosis Lab	
BIOM 420	Host-Microbe Interactions	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOM 435	Virology	
BIOM 460	Ecology of Infectious Diseases	
BIOM 490	Adv Undergrad Research	
Total Hours		10-12

Minimum Required Grade: C-

## Required Courses Outside of the Major

### Mathematics

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

**Statistics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

**Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
CHMY 311	Analytical Chem-Quant Analysis	4
Total Hours		24

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** Complete the equivalent of a full writing course (either three 1/3 writing courses or one 2/3 writing course + one 1/3 writing course or one complete writing course). The Microbiology degree requires one 2/3 writing course (BIOM 411). The Advanced College Writing Requirement is completed with one more course, chosen from any of the following.

### 1/3 Advanced Writing Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

**Complete Advanced Writing Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	

Minimum Required Grade: C-



# Microbiology B.S. - Microbial Ecology

## Bachelor of Science - Microbiology; Microbial Ecology Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 78-88

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Microbiology is the study of microorganisms including bacteria, fungi, viruses, and protozoa. The concentration in Microbial Ecology emphasizes microbial structure and function as well as interactions and relationships with the environment and other organisms. Students may continue their studies at the graduate level and seek research careers in government or private laboratories.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Biology/Microbiology Lower-Division Core	17
Upper-Division Microbiology Core Courses	19
Additional Upper-Division Courses Required for Microbial Ecology Concentration	13
Biochemistry	
Additional Upper-Division Depth Courses in Microbiology	
Required Courses Outside of the Major	29-39
Mathematics - Calculus	
Mathematics - Statistics	
Chemistry	
Physics	
Additional Science Requirement	
Advanced College Writing Requirement	
Total Hours	78-88

### Biology/Microbiology Lower-Division Core

**Note:** The lower division core should be completed before attempting most upper division major courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

### Upper-Division Microbiology Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 370	General Ecology	3
BIOM 360	General Microbiology (equiv to 260)	3
BIOM 361	General Microbiology Lab (equiv to 261)	2
BIOM 410	Microbial Genetics	3
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 415	Microbial Dvrsty Eclgy & Evltn	3
BIOM 450	Microbial Physiology	3
BIOM 451	Microbial Physiology Lab	1
Total Hours		19

Minimum Required Grade: C-

### Additional Upper-Division Courses Required for Microbial Ecology Concentration

**Biochemistry**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete either one semester or one year of Biochemistry:</b>		4-6
<b>One Semester:</b>		
BCH 380	Biochemistry	
<b>One Year:</b>		
BCH 480	Advanced Biochemistry I	
BCH 482	Advanced Biochemistry II	
Total Hours		4-6

Minimum Required Grade: C-

**Additional Upper-Division Depth Courses in Microbiology**

CODE	TITLE	HOURS
<b>Complete 7-9 credits from the following (labs must be taken if available). 7 credits if BCH 480-482 was taken; 9 credits if BCH 380) was taken.</b>		7-9
BIOB 410 & BIOB 411	Immunology and Immunology Laboratory	
BIOE 371	Gen Ecology Lab (equiv to 271)	
BIOE 400	Aquatic Microbial Ecology	
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
BIOM 420	Host-Microbe Interactions	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOM 435	Virology	
BIOM 460	Ecology of Infectious Diseases	
BIOM 490	Adv Undergrad Research	
BIOO 433 & BIOO 434	Plant Physiology and Plant Physiology Lab	
Total Hours		7-9

Minimum Required Grade: C-

## Required Courses Outside of the Major

### Mathematics - Calculus

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

**Mathematics - Statistics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

**Chemistry**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Chemistry sequences:</b>		10-20
<b>Introductory:</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab	
<b>Advanced:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	
Total Hours		10-20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		5
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
Total Hours		5

## University Of Montana

Minimum Required Grade: C-

### Additional Science Requirement

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
CHMY 311	Analytical Chem-Quant Analysis	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
NRSM 210N	Soils, Water and Climate	
GEO 420	Hydrogeology	
GEO 482	Global Change	
M 172	Calculus II	
M 273	Multivariable Calculus	
PHSX 207N	College Physics II	
PHSX 208N	College Physics II Laboratory	
STAT 451	Statistical Methods I	
STAT 452	Statistical Methods II	
STAT 457	Computer Data Analysis I	
STAT 458	Computer Data Analysis II	
Total Hours		6

Minimum Required Grade: C-

### Advanced College Writing Requirement

**Rule:** Complete the equivalent of a full writing course (either three 1/3 writing courses or one 2/3 writing course + one 1/3 writing course or one complete writing course). To meet the Advanced College Writing Requirement, Microbiology students take at least 2 partial writing courses. The Microbiology degree requires one 2/3 writing course (BIOM 411). The Advanced College Writing Requirement is completed with one more course, chosen from any of the following.

#### 1/3 Advanced Writing Courses



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
BIOB 483	Phylogenics and Evolution	3
BIOE 403	Comparative Vert Anatomy	4
BIOE 409	Behavior & Evolution Discussion	1
BIOE 428	Freshwater Ecology	5
BIOL 484	Plant Evolution	3
BIOM 402	Medical Bacteriology& Mycology	3
BIOO 320	General Botany	5
BIOO 434	Plant Physiology Lab	1
BIOO 470	Ornithology	4
BIOO 475	Mammalogy	4

Minimum Required Grade: C-

**2/3 Advanced Writing Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 486	Biochemistry Research Lab	3
BCH 499	Senior Thesis/Capstone	3-6
BIOB 411	Immunology Laboratory	2
BIOB 499	Undergraduate Thesis	3-6
BIOE 342	Field Ecology	5
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 499	Undergraduate Thesis	3-6

University Of Montana

Minimum Required Grade: C-

**Complete Advanced Writing Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOH 462	Principles Medical Physiology	3
BIOM 420	Host-Microbe Interactions	3

Minimum Required Grade: C-

# Microbiology Minor

## Minor - Microbiology

College of Humanities & Sciences

**Degree Specific Credits:** 19

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Course List		
CODE	TITLE	HOURS
Microbiology Core Courses		16
Additional Upper-Division Microbiology Requirement		3
Total Hours		19

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### Microbiology Core Courses

University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
BIOM 410	Microbial Genetics	3
BIOM 411	Exprmntl Microbial Genetcs Lab	1
BIOM 415	Microbial Dvrsty Eclgy & Evltn	3
BIOM 450	Microbial Physiology	3
BIOM 451	Microbial Physiology Lab	1
Total Hours		16

Minimum Required Grade: C-

### Additional Upper-Division Microbiology Requirement

Course List		
CODE	TITLE	HOURS
Complete 3 additional upper division credits in BIOM.		3
Total Hours		3

Minimum Required Grade: C-

# Neuroscience Program

## **Richard Bridges, Program Director**

Neuroscience encompasses the study of the nervous system and brain: its structure and function, how it underlies behavior and cognition, and how it is changed with injury and disease. Interdisciplinary by design, courses are taught by faculty from the College of Humanities & Sciences and the College of Health. Neuroscientists use their understanding of the brain and cognition to pursue careers in medicine, health professions, biomedical research, education, scientific writing, law, and business. The department offers training that leads to the Bachelor of Science, Master of Science, Dual BS/MS and Doctor of Philosophy degrees.

## **Undergraduate Programs**

### **Baccalaureate Degrees**

Neuroscience B.S., Cellular and Molecular Concentration

Neuroscience B.S., Cognitive Neuroscience Concentration

### **Undergraduate Minors**

Neuroscience Minor

# Neuroscience B.S. - Cellular and Molecular Neuroscience

## Bachelor of Science - Neuroscience; Cellular and Molecular Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 76-85

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Biology/Psychology Core Courses	25
Other Required Courses	35-36
Additional Major Courses	15
Intersection Courses	1-9
Total Hours	76-85

### Biology/Psychology Core Courses

**Note:** BIOH 458 satisfies the Upper Division Writing Requirement for the Major.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NEUR 280	From Molecules to Mind - Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
NEUR 380	Cellular and Molecular Neuroscience	3
NEUR 458	Neuroscience Research	4
<b>Complete one of the following courses:</b>		4
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	
BCH 110 & BCH 111	Intro Biology for Biochemists and Intro Biol for Biochemists Lab	
Total Hours		25

Minimum Required Grade: C-

### Other Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
M 162	Applied Calculus	4
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	5
<b>Complete one of the following courses:</b>		
STAT 216	Introduction to Statistics	3-4
or PSYX 222	Psychological Statistics	
Total Hours		35-36

Minimum Required Grade: C-

## Additional Major Courses



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BIOB 425	Adv Cell & Molecular Biology	3
Total Hours		9

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
BIOB 301	Developmental Biology	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOL 435	Comparative Animal Physiology	
Total Hours		3

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 375	General Genetics	
BIOB 468	Endocrinology	
BIOH 441	CNS Diseases	
BMED 610	Neuropharmacology	
BMED 646	Neurotoxicology	
KIN 330	Motor Learning and Control	
PSYX 356	Human Neuropsychology	
Total Hours		3

Minimum Required Grade: C-

**Intersection Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		<b>1-9</b>
BIOE 406	Behavior & Evolution	
DANC 345	New Visions Dance	
ECNS 491	Special Topics (Behavioral/Experimental Economics)	
HTH 430	Health and Mind/Body/Spirit	
PSYX 233	Fund of Psychology of Aging	
Total Hours		<b>1-9</b>

Minimum Required Grade: C-

## Neuroscience B.S. - Cognitive Neuroscience

### Bachelor of Science - Neuroscience; Cognitive Neuroscience Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 71-87

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Biology/Psychology Core Courses	25
Other Required Courses	26-33
Mathematics and Physics	
Chemistry	
Additional Major Courses	19-20
Intersection Courses	1-9
Total Hours	71-87

### Biology/Psychology Core Courses

**Note:** BIOH 458 satisfies the Upper Division Writing Requirement for the major.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	4
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NEUR 280	From Molecules to Mind - Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
NEUR 380	Cellular and Molecular Neuroscience	3
NEUR 458	Neuroscience Research	4
Total Hours		25

Minimum Required Grade: C-

## Other Required Courses

### Mathematics and Physics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 162	Applied Calculus	4
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	5
<b>Complete one of the following courses:</b>		
STAT 216	Introduction to Statistics	3-4
or PSYX 222	Psychological Statistics	
Total Hours		17-18

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Minimum Required Grade: C-

### Chemistry

CODE	TITLE	HOURS
<b>Complete one of the following Chemistry sequences:</b>		9-15
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 124	Introduction to Organic and Biochemistry Lab	
OR		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	

Minimum Required Grade: C-

### Additional Major Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 380	Biochemistry	4
PSYX 270	Fund Psychology of Learning	3
PSYX 280	Fund of Memory and Cognition	3
PSYX 356	Human Neuropsychology	3
Total Hours		13

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6-7
BIOB 301	Developmental Biology	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOH 441	CNS Diseases	
BMED 610	Neuropharmacology	
BMED 646	Neurotoxicology	
KIN 330	Motor Learning and Control	
PSYX 352	Comparative Psychology	
Total Hours		6-7

Minimum Required Grade: C-

### Intersection Courses

CODE	TITLE	HOURS
<b>Complete one of the following courses</b>		1-9
BIOE 406	Behavior & Evolution	
DANC 345	New Visions Dance	
ECNS 491	Special Topics (Behavioral/Experimental Economics)	
HTH 430	Health and Mind/Body/Spirit	
PSYX 233	Fund of Psychology of Aging	
Total Hours		1-9

Minimum Required Grade: C-

# Neuroscience Minor

## Minor - Neuroscience

College of Humanities & Sciences

**Degree Specific Credits:** 19-21

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

**Notes:**

### Summary

Required Courses	10
Electives	9-11
Total Hours	19-21

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	4
NEUR 280	Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
Total Hours		10

Minimum Required Grade: C-

### Electives

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
Complete 3 of the following courses:		9-11
BIOH 365	Human Anatomy and Physiology for Health Professions I	
NEUR 380	Molecular Neuroscience	
NEUR 441	Central Nervous System Diseases	
NEUR 458	Neuroscience Research	
PSYX 352	Comparative Psychology	
PSYX 356	Human Neuropsychology	
Total Hourse		9-11

Minimum Required Grade: C-



## Central and Southwest Asian Studies

### **Dr. Ardi Kia, Advisor**

The University of Montana has emerged as a national and international leader in recognizing the significance of Central and Southwest Asia, and translating that awareness into a major academic program. The program builds on significant faculty experience and expertise in the region, and includes scholars from a variety of academic disciplines. The program has also organized intensive summer language training programs at UM, as well as summer study tours for K-12 teachers to Central Asia, and also hosts an annual conference that brings leading scholars, diplomats, analysts, and journalists to the UM campus.

The University of Montana offers an undergraduate major as well as a Minor in Central and Southwest Asian Studies. Arabic, Chinese, Persian, Russian and Turkish language instruction are also offered. Faculty exchanges have been organized with universities in China, Egypt, Georgia, Kazakhstan, Kyrgyzstan, Morocco, Russia and Tajikistan.

### Baccalaureate Degrees

- Central and Southwest Asian Studies B.A.

### Undergraduate Minors

- Central and Southwest Asian Studies

# Central and Southwest Asian Studies B.A.

## Bachelor of Arts - Central & Southwest Asian Studies

College of Humanities & Sciences

**Degree Specific Credits:** 37-41

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students are required to complete 9 credits of lower-division core courses and 9 credits of upper-division core courses in addition to completing the capstone requirement. Students also must complete the second year sequence (16-20 credits) of either Arabic OR Chinese OR Russian, for a combined total of 37-41 credits. Students are strongly recommended to take a third or fourth year of language study.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	9
Upper-Division Core Courses	9
Language Electives	16-20
Capstone Requirement	3
Total Hours	37-41

## Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 141H	The Silk Road	3
ANTY 241H	Central Asian Culture and Civ	3
HSTR 262	Islamic Civil: Classical Age	3
Total Hours		9

Minimum Required Grade: C-

### Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ANTY 347	Central Asia and Its Neighbors	
ANTY 444	Artistic Tradtns Central Asia	
HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
HSTR 442	Cities/Landscps Central Asia	
Total Hours		9

Minimum Required Grade: C-

### Language Electives

**Rule:** Complete 1 of the following subcategories; 16-20 total credits required.

#### Arabic

## University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
ARAB 101	Elementary Modern Standard Arabic I	4
ARAB 102	Elementary Modern Standard Arabic II	4
ARAB 201	Intermediate Modern Standard Arabic I	4
ARAB 202	Intermediate Modern Standard Arabic II	4
Total Hours		16

Minimum Required Grade: C-

### Chinese

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
CHIN 101	Elementary Chinese I	5
CHIN 102	Elementary Chinese II	5
CHIN 201	Intermediate Chinese I	5
CHIN 202	Intermediate Chinese II	5
Total Hours		20

Minimum Required Grade: C-

### Russian

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
RUSS 101	Elementary Russian I	4
RUSS 102	Elementary Russian II	4
RUSS 201	Intermediate Russian I	4
RUSS 202	Intermediate Russian II	4
Total Hours		16

Minimum Required Grade: C-

### Capstone Requirement

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ANTY 494	Seminar/Workshop	3
Total Hours		3

Minimum Required Grade: C-

## Central and Southwest Asian Studies Minor

The Central and Southwest Asian Studies Minor is available to all students and consists of eighteen credits. Students selecting the minor are required to successfully complete ANTY 141H and six credits in foundational Central and Southwest Asian Studies courses (200-level courses). Students must then complete nine credits of additional course work at the 300- or 400- level. No language courses are required; however, students pursuing the minor are strongly encouraged to meet the university-wide general education modern and classical language competency requirement by completing at least the second semester of one of the following languages (100 level or higher): Chinese, Persian, Arabic, Turkish or Russian. Participation in a study-abroad program is strongly recommended.

### Minor - Central & Southwest Asian Studies

#### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Central and Southwest Asian Studies minor is available to all students. No language courses are required. Participation in a study-abroad program is strongly recommended.

### Summary

Lower-Division Core Courses	9
Introductory Course	
Foundational Courses	
Upper-Division Core Courses	9
Total Hours	18

#### Lower-Division Core Courses

##### Introductory Course

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ANTY 141H	The Silk Road	3
Total Hours		3

Minimum Required Grade: C-

**Foundational Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 241H	Central Asian Cult & Civ	3
HSTR 262	Islamic Civil: Classical Age	3
Total Hours		6

Minimum Required Grade: C-

**Upper-Division Core Courses**

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ANTY 347	Central Asia and Its Neighbors	
ANTY 442	Cities/Landscapes Central Asia	
ANTY 444	Artistic Tradtns Central Asia	
ANTY 492	Independent Study	
HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
HSTR 492	Independent Study (Must be taken for 3 credits)	
HSTR 494	Seminar (Central Asia)	
Total Hours		9

University Of Montana

Minimum Required Grade: C



# Chemistry and Biochemistry Department

## Kent Sugden, Chair

Chemistry is the central science that involves the study of molecules, their structures, their combinations, their interactions, and the energy changes accompanying chemical processes.

The Department offers the following degrees: B.S., B.A., M.S., M.A., and Ph.D.

Prospective students desiring further information on programs in the Department of Chemistry and Biochemistry should visit the websites of the Department of Chemistry and Biochemistry and the Biochemistry Program.

**High School Preparation:** In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four (or more) years of science (earth and space science, biology, chemistry, and physics), four years of a modern or classical language, and four years of English.

## Baccalaureate Degrees

- Chemistry B.A.
- Chemistry B.S.
- Chemistry B.S., Pharmacology Concentration
- Chemistry B.S., Forensic Chemistry Concentration
- Chemistry B.S., Environmental Chemistry Concentration

## Undergraduate Minors

- Chemistry Minor

## Biochemistry

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The program offers a B.S. in Biochemistry, a B.S. in Computational Biochemistry, and M.S. and Ph.D. degrees in Biochemistry & Biophysics. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

Undergraduate majors receive a solid foundation in both chemistry and biology. Biochemistry courses are usually taken in the junior year allowing majors to become involved in research with faculty and to take electives in their senior year. The major also introduces students to computer science, an essential tool in modern biochemistry. The B.S. in Biochemistry prepares students for advanced degrees in biochemistry or biophysics, for medical, dental or veterinary schools and for careers in the pharmaceutical and biotechnology industries. A Health Professions option is also offered within the B.S. in Biochemistry for

## University Of Montana

students whose career goals are in fields related to biochemistry, particularly medical school. This option is designed so that students can complete all coursework necessary for the MCAT and other exams required for health-related professional schools by the end of their third year. The program also offers a B.S. in Computational Biochemistry. This degree incorporates both foundational and advanced level courses in chemistry, biology, computer science and biochemistry to prepare students who plan to pursue careers in computationally intensive fields including bioinformatics, molecular modeling, and structure-based design. Students desiring a basic grounding in biochemistry to complement their primary major can choose to pursue a minor in Biochemistry. All students completing a major or minor in Biochemistry are eligible to take the ASBMB certification exam in their junior or senior year.

The graduate degrees in Biochemistry & Biophysics prepare students to be independent researchers in academic laboratories or in the biotechnology and pharmaceutical industries. Through coursework and independent research, graduate students in this program will become adept at the physical and structural methods necessary to probe important problems in the life sciences at the molecular level. In collaboration with the Center for Biomolecular Structure & Dynamics, the Biochemistry Program provides state-of-the-art facilities for research in biochemistry, biophysics and structural biology.

Prospective students desiring further information on these degrees should contact the Program Director by visiting the Biochemistry Program web site.

**High School Preparation:** In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four years of science, and a foreign language.

## Baccalaureate Degrees

- Biochemistry B.S.
- Biochemistry B.S., Health Professions Concentration
- Computational Biochemistry B.S.

## Undergraduate Minors

- Biochemistry

## Biochemistry B.S.

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The program offers a B.S. in Biochemistry, a B.S. in Computational Biochemistry, and M.S. and Ph.D. degrees in Biochemistry & Biophysics. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

Undergraduate majors receive a solid foundation in both chemistry and biology. Biochemistry courses are usually taken in the junior year allowing majors to become involved in research with faculty and to take electives in their senior year. The major also introduces students to computer science, an essential tool in modern biochemistry. The B.S. in Biochemistry prepares students for advanced degrees in biochemistry or biophysics, for medical, dental or veterinary schools and for careers in the pharmaceutical and biotechnology industries.

## Bachelor of Science - Biochemistry

### College of Humanities & Sciences

**Degree Specific Credits:** 93

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core	
Biochemistry	1
Biology	12
General and Organic Chemistry	20
Physics	10
Mathematics	8
Computer Science	3
Upper-Division Core	
Biochemistry	9
Biology	3
Analytical Chemistry	8
Inorganic Chemistry	3
Physical Chemistry	4
Advanced Electives	12
Total Hours	93

### Lower-Division Core

**Rule:** Must complete the following subcategories. 54 total credits required.

#### Biochemistry

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BCH 294	Seminar/Workshop	1
Total Hours		1

Minimum Required Grade: C-

#### Biology

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

**General and Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		20

Minimum Required Grade: C-

**Physics**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

### Mathematics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

### Computer Science

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CSCI 100	Intro to Programming	3
Total Hours		3

Minimum Required Grade: C-

## Upper Division Core

**Rule:** Must complete the following subcategories. 27 total credits required.

### Biochemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

**Biology**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BIOB 425	Adv Cell & Molecular Biology	3
Total Hours		3

Minimum Required Grade: C-

**Analytical Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

**Inorganic Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
Total Hours		3

Minimum Required Grade: C-

## University Of Montana

### Physical Chemistry

**Note:** Students planning to attend graduate school in biochemistry or biophysics are strongly advised to take the CHMY 373-CHMY 371 sequence

CODE	TITLE	HOURS
<b>Complete the following course:</b>		4
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	
Total Hours		4

Minimum Required Grade: C-

### Advanced Electives

**Note:** No more than 3 credits combined of BIOB 490, CHMY 490, CHMY 498 and BCH 490. No more than 3 credits combined of CHMY 397 and CHMY 494.

CODE	TITLE	HOURS
<b>Complete 12 credits from the following courses:</b>		12
BCH 490	Undergraduate Research	
BIOB 301	Developmental Biology	
BIOB 375	General Genetics	
BIOB 410	Immunology	
BIOB 411	Immunology Laboratory	
BIOB 486	Genomics	
BIOB 490	Adv Undergrad Research	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOH 370	Human Anatomy and Physiology for Health Professions II	
BIOH 405	Hematology	
BIOH 462	Principles Medical Physiology	
BIOM 360	General Microbiology	



## University Of Montana

BIOM 361	General Microbiology Lab	
BIOM 410	Microbial Genetics	
BIOM 411	Exprmntl Microbial Genetcs Lab	
BIOM 427	General Parasitology	
BIOM 428	General Parasitology Lab	
BIOM 435	Virology	
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	
CHMY 397	Teaching Chemistry	
CHMY 402	Advanced Inorganic Chem Lab	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Optn for Undrgrd Rsrch	
CHMY 485	Laboratory Safety	
CHMY 490	Undergraduate Research	
CHMY 494	Seminar/Workshop	
CHMY 498	Internship/Cooperative Educ	
CSCI 451	Computational Biology	
PHAR 421	Medicinal Chem I	
PHAR 422	Medicinal Chem II	
Total Hours		12

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biochemistry students may take the following courses or any other stand-alone advanced writing course.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

## Biochemistry B.S. - Health Professions

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The program offers a B.S. in Biochemistry, a B.S. in Computational Biochemistry, and M.S. and Ph.D. degrees in Biochemistry & Biophysics. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

A Health Professions option is offered within the B.S. in Biochemistry for students whose career goals are in fields related to biochemistry, particularly medical school. This option is designed so that students can complete all coursework necessary for the MCAT and other exams required for health-related professional schools by the end of their third year.

## Bachelor of Science - Biochemistry; Health Professions Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 96

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core	51
Biochemistry	
Biology	
General and Organic Chemistry	
Physics	
Mathematics	
Upper-Division Core	32
Biochemistry	
Microbiology	
Biology - Human	
Allied Health - Human Science	
Analytical Chemistry	
Advanced Electives	7
Social Science - Sociology and Psychology	6
Total Hours	96

### Lower-Division Core

**Rule:** Complete the following subcategories. 51 total credits required.

#### Biochemistry

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BCH 294	Seminar/Workshop	1
Total Hours		1

Minimum Required Grade: C-

#### Biology

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

**General and Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		20

Minimum Required Grade: C-

**Physics**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

### Mathematics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

## Upper-Division Core

**Rule:** Complete the following subcategories. 32 total credits required.

### Biochemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

### Microbiology

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOM 360	General Microbiology (equiv to 260)	3
BIOM 361	General Microbiology Lab	2
Total Hours		5

Minimum Required Grade: C-

**Biology - Human**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 365 & BIOH 366	Human Anatomy and Physiology for Health Professions I and Human Anatomy and Physiology for Health Professions I Laboratory	4
BIOH 370 & BIOH 371	Human Anatomy and Physiology for Health Professions II and Human Anatomy and Physiology for Health Professions II Laboratory	4
Total Hours		8

Minimum Required Grade: C-

**Allied Health - Health Science**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
AHHS 391	Special topics (Pre-Medical Science 101 Honors)	2
Total Hours		2

Minimum Required Grade: C-

**Analytical Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

## Advanced Electives

**Note:** No more than 3 credits combined of BIOB 490, CHMY 490, CHMY 498 and BCH 490. No more than 3 credits combined of CHMY 397 and CHMY 494.

CODE	TITLE	HOURS
<b>Complete 7 credits from the following courses:</b>		7
BCH 490	Undergraduate Research	
BIOB 301	Developmental Biology	
BIOB 375	General Genetics	
BIOB 410	Immunology	
BIOB 411	Immunology Laboratory	
BIOB 425	Adv Cell & Molecular Biology	
BIOB 486	Genomics	
BIOB 490	Adv Undergrad Research	
BIOH 405	Hematology	
BIOH 462	Principles Medical Physiology	
BIOM 410	Microbial Genetics	
BIOM 411	Exprmntl Microbial Genetcs Lab	
BIOM 427	General Parasitology	



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BIOM 428	General Parasitology Lab	
BIOM 435	Virology	
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	
CHMY 397	Teaching Chemistry	
CHMY 401	Advanced Inorganic Chemistry	
CHMY 402	Advanced Inorganic Chem Lab	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Optn for Undrgrd Rsrch	
CHMY 490	Undergraduate Research	
CHMY 494	Seminar/Workshop	
CHMY 498	Internship/Cooperative Educ	
PHAR 421	Medicinal Chem I	
PHAR 422	Medicinal Chem II	
STAT 451	Statistical Methods I	
Total Hours		7

Minimum Required Grade: C-

**Social Science - Sociology and Psychology**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 101S	Introduction to Sociology	3
PSYX 100S	Intro to Psychology	3
Total Hours		6

Minimum Required Grade: C-

### Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biochemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

## Computational Biochemistry B.S.

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The program offers a B.S. in Biochemistry, a B.S. in Computational Biochemistry and M.S. and Ph.D. degrees in Biochemistry & Biophysics. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

The program also offers a B.S. in Computational Biochemistry. This degree incorporates both foundational and advanced level courses in chemistry, biology, computer science and biochemistry to prepare students who plan to pursue careers in computationally intensive fields including bioinformatics, molecular-modeling and structure-based design.

## Bachelor of Science - Computational Biochemistry

### College of Humanities & Sciences

**Degree Specific Credits:** 96

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower Division Core	
Biochemistry	1
Biology	8
Computer Science	10
General Organic Chemistry	20
Physics	10
Math	8
Upper Division Core	
Biochemistry	9
Biology	3
Analytical Chemistry	8
Physical Chemistry	4
Computer Science	6
Advanced Electives	9
Total Hours	96

### Lower-Division Core

**Rule:** Must complete the following subcategories. 57 total credits required.

#### Biochemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 294	Seminar/Workshop	1
Total Hours		1

Minimum Required Grade: C-

#### Biology

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 272	Genetics and Evolution	4
Total Hours		8

Minimum Required Grade: C-

**Computer Science**

CODE	TITLE	HOURS
<b>Complete the following:</b>		
CSCI 135	Fund of Computer Science I	3
CSCI 136	Fund of Computer Science II	3
CSCI 232	Intermediate Data Structures and Algorithms	4
Total Hours		10

Minimum Required Grade: C-

**General and Organic Chemistry**

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		20

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

**Upper-Division Core****Rule:** Must complete the following subcategories. 30 total credits required.**Biochemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

**Biology**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BIOB 486	Genomics	3
Total Hours		3

Minimum Required Grade: C-

**Analytical Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

**Physical Chemistry**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		4

Minimum Required Grade: C-

### Computer Science

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 315E	Computers, Ethics, and Society	3
CSCI 451	Computational Biology	3
Total Hours		6

Minimum Required Grade: C-

### Advanced Electives

**Note:** No more than 3 credits combined of BIOB 490, CHMY 490, CHMY 498 and BCH 490. No more than 3 credits combined of CHMY 397 and CHMY 494.

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
CSCI 332	Advanced Data Structures and Algorithms	
CSCI 340	Database Design	
CSCI 444	Data Visualization	
CSCI 447	Machine Learning	
<b>Complete 6 credits from the following courses:</b>		6
BCH 490	Undergraduate Research	
BIOB 301	Developmental Biology	
BIOB 375	General Genetics	



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BIOB 410	Immunology	
BIOB 411	Immunology Laboratory	
BIOB 425	Adv Cell & Molecular Biology	
BIOB 490	Adv Undergrad Research	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOH 370	Human Anatomy and Physiology for Health Professions II	
BIOH 405	Hematology	
BIOH 462	Principles Medical Physiology	
BIOM 360	General Microbiology	
BIOM 361	General Microbiology Lab	
BIOM 410	Microbial Genetics	
BIOM 411	Exprmntl Microbial Genetcs Lab	
BIOM 427	General Parasitology	
BIOM 428	General Parasitology Lab	
BIOM 435	Virology	
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	
CHMY 397	Teaching Chemistry	
CHMY 401	Advanced Inorganic Chemistry	
CHMY 402	Advanced Inorganic Chem Lab	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Optn for Undrgrd Rsrch	
CHMY 490	Undergraduate Research	
CHMY 494	Seminar/Workshop	

## University Of Montana

CHMY 498	Internship/Cooperative Educ	
PHAR 421	Medicinal Chem I	
PHAR 422	Medicinal Chem II	
Total Hours		9

Minimum Required Grade: C-

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## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biochemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

## Biochemistry Minor

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The program offers a B.S. in Biochemistry, a B.S. in Computational Biochemistry, and M.S. and Ph.D. degrees in Biochemistry & Biophysics. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

Students desiring a basic grounding in biochemistry to complement their primary major can choose to pursue a minor in Biochemistry. All students completing a major or minor in Biochemistry are eligible to take the ASBMB certification exam in their junior or senior year.

### Minor - Biochemistry

#### College of Humanities & Sciences

**Degree Specific Credits:** 29

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Biology	4
Chemistry	16
Upper-Division Biochemistry	9
Total Hours	29

### Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
Total Hours		4

## University Of Montana

Minimum Required Grade: C-

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### Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N	College Chemistry I	4
CHMY 142N	College Chemistry I Lab	1
CHMY 143N	College Chemistry II	4
CHMY 144N	College Chemistry II Lab	1
CHMY 221	Organic Chemistry I	3
CHMY 223	Organic Chemistry II	3
Total Hours		16

Minimum Required Grade: C-

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### Upper-Division Biochemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

## Chemistry B.A.

The courses required for the B.A. degree provide a less extensive training in chemistry than do the courses required for the American Chemical Society certified B.S. degree. This is to allow the student to supplement his or her program with courses that meet his or her specific needs. Thus, this degree provides the core of traditional preparation in chemistry together with latitude for combination with an interdisciplinary field or the Teacher Education Program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

## Bachelor of Arts - Chemistry

### College of Humanities & Sciences

**Degree Specific Credits:** 76

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	45
General Chemistry	
Organic Chemistry	
Physics	
Mathematics	
Computer Science	
Upper-Division Core Courses	16
Analytical Chemistry	
Physical Chemistry	
Advanced Electives	15
Teaching Chemistry Track	
Total Hours	76

### Lower-Division Core Courses

#### General Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

#### Organic Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
Total Hours		12

Minimum Required Grade: C-

**Computer Science**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CSCI 100	Introduction to Programming	3

Minimum Required Grade: C-

## Upper-Division Core Courses

### Analytical Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

### Physical Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	4
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		8

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Chemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3



Minimum Required Grade: C-

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## Advanced Electives

**Rule:** Complete 9 credits of advanced electives in Chemistry or Biochemistry approved by the Chemistry adviser and 6 credits of advanced electives at the discretion of the student. 15 total credits required.

Minimum Required Grade: C-

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## Teaching Chemistry Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Chemistry Required Courses

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 497	Teaching and Assessing	4
ENST 472	Gen Sci: Conservation Education	3
Total Hours		7

Minimum Required Grade: C-

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University Of Montana

## Secondary Teaching Licensure

**Note:** For endorsement to teach chemistry, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

University Of Montana

## Chemistry B.S.

*(American Chemical Society Certified)*

The courses required for the B.S. degree provide a solid education in chemistry for the professional chemist and in preparation for graduate work in most areas of chemistry. These requirements meet the latest certification standards of the American Chemical Society.

### Bachelor of Science - Chemistry

College of Humanities & Sciences

**Degree Specific Credits:** 92

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

## University Of Montana

Lower-Division Core Courses	52
Biology	
General Chemistry	
Organic Chemistry	
Physics	
Mathematics	
Computer Science	
Upper-Division Core Courses	30
Analytical Chemistry	
Physical Chemistry	
Inorganic Chemistry	
Biochemistry	
Mathematics	
Advanced Electives	3
Modern & Classical Language OR Additional Advanced Electives	8
Total Hours	93

### Lower-Division Core Courses

#### Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
Total Hours		4

Minimum Required Grade: C-

**General Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

# University Of Montana

## Mathematics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
M 274	Introduction to Differential Equations	3
Total Hours		15

Minimum Required Grade: C-

## Computer Science

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CSCI 100	Introduction to Programming	3

Minimum Required Grade: C-

## Upper-Division Core Courses

### Analytical Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

### Physical Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	4
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		8

Minimum Required Grade: C-

### Inorganic Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
CHMY 402	Advanced Inorganic Chem Lab	2
Total Hours		5

Minimum Required Grade: C-

### Biochemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

### Advanced Electives

**Note:** Other classes in Chemistry, Physics, Geology, Biochemistry, or Mathematics may be used to meet the advanced electives requirement with approval of the chemistry advisor. A maximum of 3 credits of CHMY 492 or CHMY 499 may be applied toward degree requirements.

CODE	TITLE	HOURS
<b>Complete 3 credits in the following courses:</b>		3
CHMY 391	Special Topics/Expmntl Crse	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 491	Special Topics/Expmntl Crse	
CHMY 492	Independent Study	
CHMY 499	Senior Thesis/capstone	
Total Hours		3

Minimum Required Grade: C-

### Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Chemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

### Modern & Classical Language OR Additional Advanced Electives

**Rule:** Complete 2 semesters of a language or 2 additional advanced elective courses of at least 3 credits each from the above list. Subject to approval of the chemistry advisor.

**Note:** Other classes in Chemistry, Physics, Geology, Biochemistry, or Mathematics may be used to meet the advanced electives requirement with approval of the chemistry advisor. A maximum of 3 credits of CHMY 492 or CHMY 499 may be applied toward degree requirements.

Minimum Required Grade: C-



University Of Montana

## **Chemistry B.S. - Environmental Chemistry**

### **Bachelor of Science - Chemistry; Environmental Chemistry Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits: 93**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Lower-Division Core Courses	54
General Chemistry	
Organic Chemistry	
Physics	
Mathematics	
Geology	
Biology	
Upper-Division Core Courses	30
Analytical Chemistry	
Physical Chemistry	
Inorganic Chemistry	
Biochemistry	
Statistics	
Geology	
Advanced Electives	9
Total Hours	93

### Lower-Division Core Courses

#### General Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Physics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

**Mathematics**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

### Geology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		4

Minimum Required Grade: C-

### Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

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## Upper-Division Core Courses

### Analytical Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

**Physical Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		4

Minimum Required Grade: C-

**Inorganic Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
Total Hours		3

Minimum Required Grade: C-

**Biochemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
BCH 480	Advanced Biochemistry I	3
Total Hours		3

Minimum Required Grade: C-

**Statistics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
STAT 451	Statistical Methods I	3
STAT 457	Computer Data Analysis I	1
Total Hours		4

Minimum Required Grade: C-

### Geology

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GEO 320	Global Water	4
GEO 327	Geochemistry	4
Total Hours		8

Minimum Required Grade: C-

### Advanced Electives

**Note:** A maximum of 3 credits each of CHMY 492, BIOB 492, and GEO 492 be applied to meet the advanced electives requirement. In addition, a maximum of 4 credits of a language may be applied to meet the advanced electives requirement.

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		8
BCH 482	Advanced Biochemistry II	
BCH 486	Advanced Biochemistry Lab	
BIOB 490	Advanced Undergrad Research	
BIOB 492	Independent Study	
BIOE 370	General Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
BIOM 360	General Microbiology	
CHMY 391	Special Topics/Experimental Course	
CHMY 402	Advanced Inorganic Chemistry Lab	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Option for Undergraduate Research	
CHMY 491	Special Topics/Experimental Course	
CHMY 492	Independent Study	
GEO 420	Hydrogeology	
GEO 492	Independent Study	
STAT 452	Statistical Methods II	
Total Hours		8

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Chemistry students may take the following courses or any other stand-alone advanced writing course.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-



University Of Montana

## **Chemistry B.S. - Forensic Chemistry**

**Bachelor of Science - Chemistry; Forensic Chemistry Concentration**

**College of Humanities & Sciences**

**Degree Specific Credits: 97**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Lower-Division Core Courses	52
General Chemistry	
Organic Chemistry	
Biology	
Physics	
Mathematics	
Forensic Science and Criminal Justice	
Upper-Division Core Courses	32
Analytical Chemistry	
Physical Chemistry	
Inorganic Chemistry	
Biochemistry	
Experiential Learning	
Seminar	
Statistics	
Advanced Electives	7
Expressive Art - Public Speaking	3
Social Science - Criminology	3
Total Hours	97

### Lower-Division Core Courses

#### General Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Organic Chemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Biochemistry and Biology**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
Total Hours		8

Minimum Required Grade: C-

**Physics**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

### Mathematics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

### Forensic Science and Criminal Justice

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CJUS 125N	Fund of Forensic Science	3
SOCI 221	Criminal Justice System	3
Total Hours		6

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** All courses in all subcategories listed are required.

### Analytical Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

**Physical Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		4

Minimum Required Grade: C-

**Inorganic Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
Total Hours		3

Minimum Required Grade: C-

**Biochemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

**Experiential Learning**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
CHMY 488	Forensic Research	3
or CHMY 498	Internship/Cooperative Educ	
Total Hours		3

Minimum Required Grade: C-

**Seminar**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 489	Forensic Research Seminar	1
Total Hours		1

Minimum Required Grade: C-

**Statistics**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
STAT 451	Statistical Methods I	3
STAT 457	Computer Data Analysis I	1
Total Hours		4

Minimum Required Grade: C-

**Advanced Electives**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete 7 credits from the following courses:</b>		7
CHMY 411	Advanced Organic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Optn for Undrgrd Rsrch	
CHMY 542	Separation Science	
CJUS 488	Forensic Science the Crime Lab and Beyond	
Total Hours		7

Minimum Required Grade: C-

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### Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Chemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

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### Expressive Art - Public Speaking

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 111A	Introduction to Public Speaking	3
Total Hours		3

Minimum Required Grade: C-

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### Social Science - Criminology

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
SOCI 211S	Introduction to Criminology	3
Total Hours		3

Minimum Required Grade: C-



University Of Montana

## **Chemistry B.S. - Pharmacology**

### **Bachelor of Science - Chemistry; Pharmacology Concentration**

College of Humanities & Sciences

**Degree Specific Credits:** 93

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Lower-Division Core Courses	53
General Chemistry	
Organic Chemistry	
Biology	
Computer Science	
Physics	
Mathematics	
Upper-Division Core Courses	40
Analytical Chemistry	
Physical Chemistry	
Microbiology	
Biochemistry	
Pharmacology	
Biology	
Total Hours	93

### Lower-Division Core Courses

#### General Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

# University Of Montana

## Organic Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
CHMY 224	Organic Chemistry II Lab	2
Total Hours		10

Minimum Required Grade: C-

## Biology

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

## Computer Science

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CSCI 100	Introduction to Programming	3
Total Hours		3

Minimum Required Grade: C-

## Physics

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

### Mathematics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

## Upper-Division Core Courses

### Analytical Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

### Physical Chemistry

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		4

Minimum Required Grade: C-

**Microbiology**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
Total Hours		5

Minimum Required Grade: C-

**Biochemistry**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
Total Hours		9

Minimum Required Grade: C-

**Pharmacology**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHAR 421	Medicinal Chem I	3
PHAR 422	Medicinal Chem II	3
PHAR 443	Pharmacol & Toxicol I	4
PHAR 444	Pharmacology & Toxicol II	4
Total Hours		14

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Chemistry students may take the following courses or any other stand-alone advanced writing course.

CODE	TITLE	HOURS
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C-

University Of Montana

# Chemistry Minor

## Minor - Chemistry

College of Humanities & Sciences

**Degree Specific Credits: 36-38**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

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### Summary

Lower-Division Core Courses	18
Upper-Division Core Courses	8
Physical Chemistry Requirement	4
Upper-Division Electives	6-8
Teaching Chemistry Track	
Total Hours	36-38

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### Lower-Division Core Courses

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
Total Hours		18

Minimum Required Grade: C-

### Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4
Total Hours		4

Minimum Required Grade: C-

### Physical Chemistry Requirement

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmodynms	4
Total Hours		4

Minimum Required Grade: C-

### Upper-Division Electives



## University Of Montana

**Note:** If the student's major requires Biochemistry, BCH 380 or BCH 480 and BCH 482 may not be used to satisfy this requirement.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6-8
BCH 380	Biochemistry	
BCH 480	Advanced Biochemistry I	
BCH 482	Advanced Biochemistry II	
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	
CHMY 401	Advanced Inorganic Chemistry	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
Total Hours		6-8

Minimum Required Grade: C-

## Teaching Chemistry Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

## University Of Montana

### Teaching Chemistry Track Requirements

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 497	Teaching and Assessing	4
ENST 472	Gen Sci: Conservation Education	3
Total Hours		7

Minimum Required Grade: C-

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### Secondary Teaching Licensure

**Note:** For endorsement to teach chemistry, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Brewing Science C.A.S.

Certificates in brewing science allow students to attain and demonstrate a general knowledge of the science and practice of malting and brewing, a greater appreciation of the science and manufacturing processes of beer production, and technical competence in laboratory testing procedures related to brewing. Students who complete these certificates may seek employment in the malting, brewing or distilling industry.

### Certificate of Applied Science - Brewing Science

#### College of Humanities & Sciences

**Degree Specific Credits:** 33

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Required Courses		33
Total Hours		33

#### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Chemistry sequences:</b>		10
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 124	Introduction to Organic and Biochemistry Lab	
<b>OR:</b>		
CHMY 141N and CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N and CHMY 144N	College Chemistry II and College Chemistry II Lab	
<b>Complete all of the following courses:</b>		
BCH 380 or BCH 480	Biochemistry or Advanced Biochemistry	4
BIOB 160N	Principles of Living Systems	3
BIOB 260	Cellular and Molecular Biology	4
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
CHMY 311	Quantitative Analysis	4
CHMY 314	Brewing Science	3
Total Hours		33

Minimum Required Grade: C-

## Brewing Science Certificate

Certificates in brewing science allow students to attain and demonstrate a general knowledge of the science and practice of malting and brewing, a greater appreciation of the science and manufacturing processes of beer production, and technical competence in laboratory testing procedures related to brewing. Students who complete these certificates may seek employment in the malting, brewing or distilling industry.

### Post-secondary Certificate - Brewing Science

#### College of Humanities & Sciences

**Degree Specific Credits:** 17

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Required Courses		17
Total Hours		17

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
BIOB 160N	Principles of Living Systems	3
CHMY 313	Introduction to Brewing Science	1
CHMY 314	Brewing Science	3
Total Hours		17

University Of Montana

Minimum Required Grade: C-

## Communication Studies Department

### Gregory Larson, Chair

Communication Studies engages in both social-scientific and humanistic approaches to the analysis, understanding and improvement of human communication. The discipline traces its roots to ancient Greek and Roman studies of the functions of public discourse in society, but in the twentieth century communication came to embrace the studies of interpersonal and small group interaction, human relations in organizations, media and society, and intercultural interaction. Although interdisciplinary in spirit, the discipline has a core of knowledge, theory, and concepts concentrating on such things as symbols, messages, interactions, networks, audiences, and persuasive campaigns. Uniting the field is the belief that the role of communication in human experience is basic to comprehending complex situations and problems in the modern world. The discipline has roles in both the broad traditions of liberal arts education and in the development and refinement of practical skills.

The Department of Communication Studies at the University of Montana-Missoula focuses on three broad areas of study: interpersonal interaction and human relationships, organizational communication, and rhetoric and public discourse. The knowledge and skills the student may acquire in each of these areas are important to functioning effectively in one's personal life, at work, and as a citizen of the larger society in a rapidly changing world.

The program in Communication Studies helps to prepare students for such diverse professions as: public relations officer, marketing analyst, human resources or personnel manager, community mediator, political speech writer, health communication trainer, social services director, or student services coordinator. Also, undergraduate and graduate study can assist the student in pursuing advanced studies for law, the ministry, and higher education.

### Baccalaureate Degrees

- Communication Studies B.A.
- Communications Studies B.A., Communication & Human Relationships Concentration
- Communications Studies B.A., Organizational Communication Concentration
- Communications Studies B.A., Rhetoric and Public Discourse Concentration

### Undergraduate Minors

- Communication Studies

### Undergraduate Certificates

- Health Communication

# Communication Studies B.A.

## Bachelor of Arts - Communication Studies

### College of the Arts and Media

**Degree Specific Credits:** 39-40

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To graduate with a degree in Communication Studies, the student must complete 36 COMX credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved Statistics course (3 credits). A maximum of 6 credits in COMX 312 and a maximum of 6 credits in COMX 398 may count toward a major in Communication Studies.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	12
Upper-Division Core Courses	6
Research	
Upper-Division Writing	
Additional Major Electives	18
Statistics Requirement	3-4
Total Hours	39-40

### Lower-Division Core Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 220S	Introduction to Organizational Communication	3
COMX 240H	Introduction to Rhetorical Theory	3
Total Hours		12

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Complete the following subcategories. 6 total credits required.

### Research

**Note:** Students taking COMX 460 in the fall semester will also be required to take COMX 461. Those taking COMX 460 in the spring or summer are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 460	Research Methods	3
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Writing

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 413	Communication and Conflict-Writing	
COMX 414	Communication in Personal Relationships	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 424	Risk, Crisis, and Communication	
COMX 445	Rhetorical Criticism and Theory	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
Total Hours		3

Minimum Required Grade: C-

### Additional Major Electives

CODE	TITLE	HOURS
<b>Complete 18 COMX credits to achieve a total of 36 COMX credits for the degree.</b>		18
Total Hours		18

Minimum Required Grade: C-

### Statistics Requirement

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
EDU 421	Statistical Procedures in Educ	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

# Communication Studies B.A. - Communication and Human Relationships

## Bachelor of Arts - Communication Studies; Communication & Human Relationships Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 51-52

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To graduate with a degree in Communication Studies, the student must complete 36 COMX credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course. For the Human Relationships concentration, students must complete an additional 12 credits in allied courses to reach 48 total degree credits. A maximum of 6 credits in COMX 312 and a maximum of 6 credits in COMX 398 may count toward a major in Communication Studies.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	12
Upper-Division Core Courses	6
Research	
Upper-Division Writing	
Comm & Human Relationships Concentration	30
Major Courses	
Allied Courses	
Additional Major Electives	
Statistics Requirement	3-4
Total Hours	51-52

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 220S	Introduction to Organizational Communication	3
COMX 240H	Introduction to Rhetorical Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Core Courses

**Rule:** Complete the following subcategories. 6 total credits required.

#### Research

**Note:** Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461. Those taking COMX 460 in summer are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 460	Research Methods	3
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Writing

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 413	Communication and Conflict-Writing	
COMX 414	Communication in Personal Relationships	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 424	Risk, Crisis, and Communication	
COMX 445	Rhetorical Criticism and Theory	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
Total Hours		3

Minimum Required Grade: C-

## Communication & Human Relationships Concentration

**Rule:** Complete the following subcategories. 30 total credits required.

### Major Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete five of the following courses:</b>		15
COMX 202S	Nonverbal Communication	
COMX 311	Family Communication	
COMX 380	Gender and Communication	
COMX 412	Communication and Conflict	
COMX 414	Communication in Personal Relationships	
COMX 415	Intercultural Communication	
COMX 480	Health Communication	
COMX 485	Interaction and Well-being	
COMX 491	ST: Health and Family	
Total Hours		15

Minimum Required Grade: C-

**Allied Courses**

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
ANTY 126	Anthropology and Global Health	
ANTY 220S	Culture & Society	
ANTY 422	Mind, Culture and Society	
ANTY 423	Culture and Identity	
ANTY 426	Culture, Health and Healing	
ANTY 427	Anthropology of Gender	
COUN 242S	Intimate Relationships	
COUN 475	Forgiveness & Reconcilia	

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HFD 494	Seminar in Human Development	
PSYX 230	Developmental Psychology	
PSYX 233	Fund of Psychology of Aging	
PSYX 330	Child Development	
PSYX 345	Child & Adolescent Psych Disorders	
PSYX 348	Psychology of Family Violence	
PSYX 360	Social Psychology	
PSYX 383	Health Psychology	
PSYX 385	Psychology of Personality	
S W 420	Child Abuse/Child Welfare	
S W 455	Social Gerontology	
SOCI 220S	Race, Gender & Class	
SOCI 275S	Gender and Society	
SOCI 332	Sociology of the Family	
SOCI 350	The Community	
SOCI 382	Soc Psych and Social Structure	
Total Hours		12

Minimum Required Grade: C-

**Additional Major Electives**

CODE	TITLE	HOURS
<b>Complete 3 additional COMX credits to achieve a total of 36.</b>		3

Minimum Required Grade: C-

**Statistics Requirement**



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
EDU 421	Statistical Procedures in Educ	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

# Communication Studies B.A. - Organizational Communication

## Bachelor of Arts - Communication Studies; Organizational Communication Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 48

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To graduate with a degree in Communication Studies, the student must complete 36 COMX credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course (3 credits). For the Organizational Communication concentration, students must complete an additional 9 credits in Allied courses to reach 48 degree credits. A maximum of 6 credits in COMX 312 and a maximum of 6 credits in COMX 398 may count toward a major in communication studies.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	12
Upper-Division Core Courses	6
Research	
Upper-Division Writing	
Organizational Communication Concentration	27
Major Courses	
Allied Courses	
Additional Major Electives	
Statistics Requirement	3-4
Total Hours	48-49

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 220S	Introduction to Organizational Communication	3
COMX 240H	Introduction to Rhetorical Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Core Courses

**Rule:** Complete the following subcategories. 6 total credits required.

#### Research

**Note:** Students must complete an approved Statistics course prior to taking COMX 460. Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461. Those taking COMX 460 in summer are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 460	Research Methods	3
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Writing

**Note:** One of these courses is required to complete the upper-division writing requirement in the major. This counts toward the total credits needed for the major.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 413	Communication and Conflict-Writing	
COMX 414	Communication in Personal Relationships	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 424	Risk, Crisis, and Communication	
COMX 445	Rhetorical Criticism and Theory	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
Total Hours		3

Minimum Required Grade: C-

### Organizational Communication Concentration

**Rule:** Complete the following subcategories. 27 total credits required.

#### Major Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete five of the following courses:</b>		15
COMX 210	Communication in Small Groups	
COMX 351	Principles of Public Relations	
COMX 352	Public Relations Portfolio	
COMX 412	Communication and Conflict	
COMX 415	Intercultural Communication	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 424	Risk, Crisis, and Communication	
COMX 425	Communication in Health Organizations	
COMX 480	Health Communication	
Total Hours		15

Minimum Required Grade: C-

**Allied Courses**

University Of Montana

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BMGT 340	Management & Organization Behavior	
BMGT 444	Management Communications	
BMGT 480	Cross-Cultural Mgmt	
BMKT 325	Principles of Marketing	
BMKT 343	Integrated Marketing Comm	
BMKT 412	Non Profit Marketing	
CHTH 355	Theory Practicum Community Health Education	
CHTH 445	Program Planning in Community Health	
HTH 465	Leading Health and, Human Perform Orgs	
NPAD 460	Nonprofit Marketing and Social Media	
NPAD 466	Nonprofit Adm & Pub Svc	
PSCI 361	Public Administration	
PSCI 462	Human Resource Management	
SOCI 306	Sociology of Work	
SOCI 345	Sociology of Organizations	
SOCI 471	Gender and Global Development	
Total Hours		9

Minimum Required Grade: C-

**Additional Major Electives**

CODE	TITLE	HOURS
<b>Complete 3 additional COMX credits to achieve a total 36.</b>		3

Minimum Required Grade: C-

**Statistics Requirement**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
EDU 421	Statistical Procedures in Educ	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

# Communication Studies B.A. - Rhetoric and Public Discourse

## Bachelor of Arts - Communication Studies; Rhetoric and Public Discourse Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 51-52

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To graduate with a degree in Communication Studies, the student must complete 36 COMX credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	12
Upper-Division Core Courses	6
Research	
Upper-division Writing	
Rhetoric & Public Discourse Concentration	30
Major Courses	
Allied Courses	
Additional Major Electives	
Statistics Requirement	3-4
Total Hours	51-52



### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 220S	Introduction to Organizational Communication	3
COMX 240H	Introduction to Rhetorical Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Core Courses

**Rule:** Complete the following subcategories. 6 total credits required.

#### Research

**Note:** Students must complete an approved Statistics course prior to taking COMX 460. Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461. Those taking COMX 460 in summer are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 460	Research Methods	3
Total Hours		3

Minimum Required Grade: C-

#### Upper-Division Writing Course

CODE	TITLE	HOURS
<b>Choose one of the following courses:</b>		3
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 413	Communication and Conflict-Writing	
COMX 414	Communication in Personal Relationships	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 424	Risk, Crisis, and Communication	
COMX 445	Rhetorical Criticism and Theory	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
Total Hours		3

Minimum Required Grade: C-

## Rhetoric & Public Discourse Concentration

**Rule:** Complete the following subcategories. 27 total credits required.

### Major Courses

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
COMX 241	Persuasive Communication	
COMX 242	Argumentation	
COMX 343	Persuasive Speaking and Criticism	
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 349	Communication, Consumption, and Climate	
COMX 380	Gender and Communication	
COMX 445	Rhetorical Criticism and Theory	
COMX 447	Rhetorical Construction of Women	
COMX 448	Feminisms and Film	
COMX 449	Rhetoric of Women's Activism	
COMX 191	Special Topics	
or COMX 291	Special Topics	
or COMX 391	Special Topics	
or COMX 491	Special Topics	
Total Hours		12

Minimum Required Grade: C-

**Allied Courses**

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
ANTY 122S	Race and Minorities	
CCS 103X	Introduction to Climate Change: Science & Society	
ECNS 433	Economics of the Environment	

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ECNS 445	Int Env Econ & Clim Change	
ENST 230H	Nature and Society	
ENST 367	Environmental Politics & Policies	
ENST 420	US Environmental Movement	
FILM 103	Introduction to Film	
FILM 381	Studies in Film	
FILM 447	Film Theory	
HSTA 102H	American History II	
HSTA 262	Abolitionism	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
HSTA 344	African-American Struggle for Equality	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 302H	Ancient Greece	
HSTR 364	Environmental History	
LIT 110L	Introduction to Literature	
NRSM 349E	Climate Change Ethics/Policy	
PHL 112E	Intro Ethics and Environment	
PHL 235	Intro to Logic: Induction	
PHL 422	Environmental Philosophy	
PSCI 250E	Intro to Political Theory	
PSCI 342	Media, Public Opinion, Polling	
PSCI 352Y	American Political Thought	
PSCI 444	Am Political Participation	

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PSCI 471	American Constitutional Law	
SOCI 220S	Race, Gender & Class	
SOCI 325	Social Stratification	
SOCI 350	The Community	
SOCI 470	Environmental Sociology	
SOCI 485	Political Sociology	
WGSS 150X	Women's Rights and Women's Roles Around the World	
WGSS 163L	Hist/Lit Persp Women	
WGSS 263S	Social and Political Perspectives on Gender and Sexuality	
WGSS 250	Media Representations of Women, Men, and Sexuality	
WGSS 363	Feminist Theory and Methods	
Total Hours		12

Minimum Required Grade: C-

### Additional Major Electives

CODE	TITLE	HOURS
<b>Complete 3 additional COMX credits to achieve a total 36.</b>		3

Minimum Required Grade: C-

### Statistics Requirement

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
EDU 421	Statistical Procedures in Educ	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

# Communication Studies Minor

## Minor - Communication Studies

College of Humanities & Sciences

**Degree Specific Credits:** 20

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Communication Studies minor requires a minimum of 20 credits in COMX courses, with at least 9 credits in courses numbered 300 and above.

### Summary

Lower-Division Core Courses	3
Electives	17
Total Hours	20

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 111A	Introduction to Public Speaking	3
Total Hours		3

Minimum Required Grade: C-

### Electives

**Note:** A maximum of 6 credits in COMX 312 may count toward a minor in Communication Studies.

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CODE	TITLE	HOURS
	<b>Complete 17 additional credits of COMX courses with at least 9 credits being at the 300-level or above.</b>	17

Minimum Required Grade: C-



# Health Communication

## Post-secondary Certificate - Health Communication

College of Humanities & Sciences

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Course	3
Electives	9
Health Communication Electives	
Approved Communication Skills Course	
Total Hours	12

### Required Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
COMX 480	Health Communication	3
Total Hours		3

Minimum Required Grade: C-

### Electives

#### Health Communication Electives

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
COMX 425	Communication in Health Organizations	
COMX 485	Interaction and Well-being	
COMX 491	Special Topics (Social and Behavior Change)	
Total Hours		6

Minimum Required Grade: C-

**Approved Communication Skills Course**

CODE	TITLE	HOURS
<b>Take one of the following courses:</b>		3
COMX 210	Communication in Small Groups	
COMX 241	Persuasive Communication	
COMX 242	Argumentation	
COMX 351	Principles of Public Relations	
COMX 412	Communication and Conflict	
COMX 414	Communication in Personal Relationships	
COMX 424	Risk, Crisis, and Communication	
Total Hours		3

Minimum Required Grade: C-

# Computer Science Department

## Jesse Johnson, Chair

The growing utility of computers in research and education, as well as the increased impact of computers on our modern society, strongly implies that knowledge of computers and their capabilities should be a part of the basic education of all students. The courses listed below are designed to provide the student with this knowledge and to prepare the student for a career in a field in which there is a growing need for trained personnel. The objective of the undergraduate curriculum in computer science is to develop professionally competent, broadly educated computer scientists who wish to pursue professional careers or graduate studies.

The B.S. program is accredited by the Computing Accreditation Commission of ABET. For more information, access the Computer Science Department homepage or email the chair Jesse Johnson.

**High School Preparation:** In addition to general University admission requirements, pre-college preparation should include as many computer science courses as possible, and four years of high school mathematics, to include algebra, trigonometry and pre-calculus. Also recommended are physics, chemistry and biology.

## Admission Requirements

Admission to computer science courses varies according to course level and other departmental standards. However, students must have completed all prerequisite courses with a grade of at least a "C-".

### Lower-Division Courses

Most 100- and 200-level courses are open on a first-come, first-served basis to all students who have the prerequisites.

### Upper-Division Courses

Admission to 300-level or above courses requires successful completion of the prerequisites.

### Major-Minor Status

Completed change of major forms along with college transcripts must be turned in to the department when declaring computer science as a major or minor.

## Baccalaureate Degrees

- Computer Science B.S.
- Computer Science-Mathematical Sciences Combined Major

## Undergraduate Minors

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- Computer Science

## **Undergraduate Certificates**

- Bioinformatics Professional Certificate
- Computer Programming Certificate

# Computer Science B.S.

## Bachelor of Science - Computer Science

College of Humanities & Sciences

**Degree Specific Credits:** 86-97

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Computer Science Core Courses		32
Science Core		9-10
Science Electives		6-10
Communication Requirement		3
Concentration		36-42
Software Engineering		
Data Science		
Algorithm Development		
Total Hours		86- 97

## Computer Science Core Courses

### Notes:

- CSCI 315E will fulfill the upper-division writing requirement.
- Only students choosing the Software Engineering concentration may take M 162 (Applied Calculus) instead of M 171 (Calculus I).

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 106	Careers in Computer Science	1
CSCI 150	Introduction to Computer Science	3
CSCI 151	Interdisciplinary Computer Science I	3
CSCI 152	Interdisciplinary Computer Science II	3
CSCI 232	Intermediate Data Structures and Algorithms	3
CSCI 258	Web Applications Development	3
CSCI 332	Advanced Data Structures and Algorithms	3
CSCI 315E	Computers, Ethics, and Society	3
CSCI 340	Database Design	3
M 171 or M 162	Calculus I or Applied Calculus (Software Engineering only)	4
M 225	Discrete Math	3
Total Hours		32

Minimum Required Grade: C-

## Science Core

**Rule:** Complete 1 of the following subcategories of science sequences. 9-10 total credits required.

### Biology Sequence Option

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
Total Hours		9

Minimum Required Grade: C-

**Chemistry Sequence Option**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

**Physics Sequence Option**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

## Science Electives

**Rule:** Complete 2 of the following courses. Laboratory courses must be taken in conjunction with their associated lecture course.

**Note:** The Biology, Chemistry, or Physics sequence chosen to fulfill the science core may not count toward the science electives requirement.



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CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6-10
ASTR 131N & ASTR 134N	Planetary Astronomy and Planetary Astronomy Lab	
ASTR 132N & ASTR 135N	Stars, Galaxies, and the Universe and Stars, Galaxies, and the Universe Lab	
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	
BIOB 170N & BIOB 171N	Princpls Biological Diversity and Princpls Biological Dvrsty Lab	
BIOM 250N & BIOM 251	Microbiology for Hlth Sciences and Microbiology Hlth Sciences Lab	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
FORS 201	Forest Biometrics	
GEO 101N & GEO 102N	Introduction to Physical Geology and Introduction to Physical Geology Lab	
GEO 225	Earth Materials	
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
PHSX 343	Modern Physics	
PHSX 444	Advanced Physics Lab	
Total Hours		6-10

Minimum Required Grade: C-

## Communication Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	
COMX 242	Argumentation	
Total Hours		3

Minimum Required Grade: C-

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## Concentrations

**Rule:** All students must choose one of the following three concentrations and complete all required courses listed within.

### Software Engineering Concentration

**Notes:**

- Only students choosing the Software Engineering concentration may take M 162 (Applied Calculus) instead of M 171 (Calculus I).
- A maximum of 3 credits of Computer Science electives may be in research credits (CSCI 390 or CSCI 490).
- A maximum of 3 credits of Computer Science electives may be in internship credits (CSCI 398 or CSCI 498).

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 181	Web Design and Programming	3
CSCI 322	Web Applications Development II	3
CSCI 426	Software Design and Development I	3
CSCI 427	Software Design and Development II	3
CSCI 443 or CSCI 400	User-Interface Design or Digital Entrepreneurship	3
<b>Advanced Software Electives - Complete two of the following courses:</b>		6
CSCI 400	Digital Entrepreneurship	
CSCI 443	User Interface Design	
CSCI 444	Data Visualization	
CSCI 498	Internship	
<b>Upper-Division Computer Science Electives</b>		15
Complete 15 credits of CSCI courses numbered 300 and above.		
Total Hours		36

Minimum Required Grade: C-

## Data Science Concentration

### Notes:

- A maximum of 3 credits of Computer Science electives may be in research credits (CSCI 390 or CSCI 490).

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- A maximum of 3 credits of Computer Science electives may be in internship credits (CSCI 398 or CSCI 498).

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 172	Calculus II	4
M 221	Linear Algebra	4
STAT 341	Probability and Statistics	3
CSCI 444	Data Visualization	3
CSCI 447	Machine Learning	3
CSCI 477	Simulations	3
<b>Advanced Math Elective - Complete one of the following courses:</b>		3
M 273	Multivariable Calculus	
M 274	Introduction to Differential Equations	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
<b>Data Science Applications Elective - Complete one of the following courses:</b>		3-6
BMIS 482	Big Data Project	
CSCI 426 and CSCI 427	Software Design and Development I and Software Design and Development II	
CSCI 590	Computer Science Research	

CSCI 598	Computer Science Internship	
M 467	Data Science Projects	
<b>Upper-Division Computer Science Electives</b>		9-12
Complete 9-12 credits of CSCI courses numbered 300 and above or a second upper-division Advanced Math Elective.		
Total Hours		42

Minimum Required Grade: C-

## Algorithm Development Concentration

### Notes:

- A maximum of 3 credits of Computer Science electives may be in research credits (CSCI 390 or CSCI 490).
- A maximum of 3 credits of Computer Science electives may be in internship credits (CSCI 398 or CSCI 498).

CODE	TITLE	HOURS	
<b>Complete all of the following courses:</b>			
M 172	Calculus II	4	
M 221	Linear Algebra	4	
STAT 341	Probability and Statistics	3	
CSCI 361	Computer Architecture	3	
CSCI 432	Advanced Algorithms Topics	3	
<b>Algorithm Development Elective - Complete 6 credits of the following courses:</b>		6	

CSCI 451	Computational Biology		
CSCI 480	Parallel Computing		
CSCI 491	Software Optimization		
CSCI 491	Cybersecurity		
<b>Upper-Division Computer Science Electives</b>		15	
Complete 15 credits of upper division CSCI courses and as many as 3 credits of approved upper division math elective			
<b>Approved upper division math elective - May be taken in place of one upper division CS elective:</b>			
M 361	Discrete Optimization		
M 362	Linear Optimization		
M 414	Deterministic Models		
M 440	Numerical Analysis		
M 485	Graph Theory		
STAT 421	Probability Theory		
Total Hours		38	

Minimum Required Grade: C-

## Computer Science-Mathematical Sciences (Combined Major)

The purpose of the combined program is to provide a thorough background in both allied disciplines and to inculcate a deeper understanding of their goals and methods. A student must complete 62 credits in the two disciplines:

- 31 of these credits in Computer Science courses and
- 31 of these credits in Mathematical Sciences courses.

Each student plans a program in consultation with a Computer Science and a Mathematical Sciences advisor. Students planning to attend graduate school in computer science or the mathematical sciences should consult with their respective advisors.

## Bachelor of Science - Computer Science-Mathematical Science

### College of Humanities & Sciences

**Degree Specific Credits:** 74-75

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Mathematical Science	31
Computer Science	31
Science Requirement	9-10
Biology Sequence Option	
Chemistry Sequence Option	
Physics Sequence Option	
Public Speaking Requirement	3
Total Hours	74-75

### Mathematical Sciences

**Rule:** Complete the following subcategories. 31 total credits required.

#### Mathematical Sciences Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 307	Introduction to Abstract Mathematics	3
or M 225	Introduction to Discrete Mathematics	
Total Hours		19

Minimum Required Grade: C-

#### Mathematical Sciences Electives



## University Of Montana

**Note:** The combined 9 credits of Computer Science Electives and twelve 12 credits of Mathematical Sciences Electives must include at least three 3 or 4 credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 and STAT 451, STAT 452).

CODE	TITLE	HOURS
<b>Complete 12 credits of the following courses:</b>		12
M 274	Introduction to Ordinary Differential Equations	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	

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STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 451	Statistical Methods I	
STAT 452	Statistical Methods II	
Total Hours		12

Minimum Required Grade: C-

## Computer Science

**Rule:** Complete the following subcategories. 31 total credits required.

### Computer Science Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 106	Careers in Computer Science	1
CSCI 150	Introduction to Computer Science	3
CSCI 151	Interdisciplinary Computer Science I	3
CSCI 152	Interdisciplinary Computer Science II	3
CSCI 222	Web Applications Development I	3
CSCI 232	Intermediate Data Structures and Algorithms	3
CSCI 332	Advanced Data Structures and Algorithms	3
CSCI 340	Database Design	3
Total Hours		22

Minimum Required Grade: C-

### Computer Science Electives

**Rule:** In addition to the 22 credits in the Computer Science core, students must take an additional 9 upper division (three hundred level or higher) Computer Science credits.

#### Note:

1. A total of at most three of the 9 credits of Computer Science Electives may be in CSCI 398 or CSCI 498.

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2. The combined 9 credits of Computer Science Electives and twelve credits of Mathematical Sciences Electives must include at least three 3 or 4 credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 and STAT 451, STAT 452).

CODE	TITLE	HOURS
<b>Complete 9 credits of upper-division (300-level or higher) CSCI courses.</b>		9
Total Hours		9

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete the course work from 1 of the following subcategories. 9-10 total credits required.

### Biology

CODE	TITLE	HOURS
<b>If you choose biology, complete all of the following course s:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
Total Hours		9

Minimum Required Grade: C-

### Chemistry

CODE	TITLE	HOURS
<b>If you choose chemistry, complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

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Minimum Required Grade: C-

### Physics

CODE	TITLE	HOURS
<b>If you choose physics, complete all of the following courses:</b>		
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

### Public Speaking Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
or COMX 242	Argumentation	
Total Hours		3

Minimum Required Grade: C-

### Suggested Curricula

**Note:** Students are encouraged to choose their Computer Science and Mathematical Sciences Electives according to one of the following curricula; these tracks are suggestions only and, as such, optional. Note that the suggested curricula do not include an advanced College Writing Course.

#### Applied Math Scientific Programming

CODE	TITLE	HOURS
M 274	Introduction to Ordinary Differential Equations	3
M 412	Partial Differential Equations	3
M 414	Deterministic Models	3
<b>Select one of the following:</b>		3-4
M 381	Advanced Calculus I	
M 440	Numerical Analysis	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
STAT 341	Introduction to Probability and Statistics	
<b>Select three of the following:</b>		9
CSCI 441	Computer Graphics Programming	
CSCI 444	Data Visualization	
CSCI 460	Operating Systems	
CSCI 477	Simulation	
Total Hours		21-22

**Combinatorics and Optimization Artificial Intelligence**

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 361	Discrete Optimization	3
M 362	Linear Optimization	3
<b>Select two of the following:</b>		6
M 325	Discrete Mathematics	
M 414	Deterministic Models	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
CSCI 446	Artificial Intelligence	3
CSCI 447	Machine Learning	3
CSCI 460	Operating Systems	3
Total Hours		21

**Data Science (Big Data Analytics)**

CODE	TITLE	HOURS
M 461	Data Science Analytics	3
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	3
STAT 341	Introduction to Probability and Statistics	3
STAT 451	Statistical Methods I	3
STAT 452	Statistical Methods II	3
<b>Select three of the following:</b>		9
CSCI 444	Data Visualization	
CSCI 447	Machine Learning	
CSCI 448	Pattern Recognition	
CSCI 464	Applications of Mining Big Data	
CSCI 480	Applied Parallel Computing Techniques	
Total Hours		24

**Statistics Machine Learning**

CODE	TITLE	HOURS
STAT 341	Introduction to Probability and Statistics	3
STAT 421	Probability Theory	3
<b>Select two of the following:</b>		6
M 325	Discrete Mathematics	
M 362	Linear Optimization	
M 485	Graph Theory	
STAT 422	Mathematical Statistics	
<b>Select three of the following:</b>		9
CSCI 340	Database Design	
CSCI 444	Data Visualization	
CSCI 446	Artificial Intelligence	
CSCI 447	Machine Learning	
CSCI 451	Computational Biology	
Total Hours		21

## Algebra Analysis



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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 381	Advanced Calculus I	3
M 431	Abstract Algebra I	4
<b>Select two of the following:</b>		7-8
M 326	Number Theory	
M 432	Abstract Algebra II	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
CSCI 426	Software Design and Development I	3
CSCI 460	Operating Systems	3
CSCI Elective		3
Total Hours		23-24

# Computer Science Minor

## Minor - Computer Science

College of Humanities & Sciences

**Degree Specific Credits:** 19

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The traditional minor in computer science emphasizes computer programming and related skills.

### Summary

Fundamentals	13
Minor Electives	6
Total Hours	19

### Computer Science Courses

**Rule:** Complete the following subcategories. 18 total credits required.

#### Fundamentals

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 150	Introduction to Programming	3
CSCI 151	Fund of Computer Science I	3
CSCI 152	Fund of Computer Science II	3
CSCI 232	Intermediate Data Structures and Algorithms	4
Total Hours		13

Minimum Required Grade: C-

#### Minor Electives

University Of Montana

CODE	TITLE	HOURS
	<b>Complete 6 credits of the Computer Science (CSCI) at the 200-level or above. At least 3 credits must be at the 300-level or above.</b>	6
Total Hours		6

Minimum Required Grade: C-

## Bioinformatics Certificate

The Biological Sciences have become more and more data intensive. Many biological biochemistry experiments, including genomic sequencing, gene expression experiments, Nuclear Magnetic Resonance, Mass Spec, Etc., generate huge quantities of data. This certificate ensures that the student has the computational skills necessary to analyze and manipulates such large quantities of data.

### Post-Secondary Certificate - Bioinformatics

#### College of Humanities & Sciences

**Degree Specific Credits: 12**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

#### Summary

Required Courses	6
Elective Courses	6
Total Hours	12

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		6
CSCI 151	Fund of Computer Science I	
or BIOB 488	Programming for Biology	
CSCI 451	Computational Biology	
Total Hours		6

Minimum Required Grade: C-

#### Elective Courses

University Of Montana

**Note:** BIOB 488 may only fulfill this requirement if not taken as a required course.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete two of the following courses:</b>		<b>6</b>
BCH 480	Advanced Biochemistry I	
BIOB 486	Genomics	
BIOB 488	Programming for Biology	
CSCI 444	Data Visualization	
CSCI 448	Pattern Recognition	
Total Hours		<b>6</b>

Minimum Required Grade: C-

## Computer Programming Certificate

Programming is an essential skill for solving problems in many fields. Programming gives maximum flexibility in processing and understanding data, constructing computational models, and building user friendly applications. Programming skills are in high demand in the marketplace. Completing this certificate could be the first step towards a career that involves software development.

Students will apply object-oriented principles to develop software systems. Students will learn to apply and program data structures like lists, trees, and hash tables. The elective course allows the student to learn about software engineering, web programming, mobile device programming, or user interface design.

## Post-Secondary Certificate - Computer Programming

### College of Humanities & Sciences

**Degree Specific Credits:** 13

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	13
Total Required Credits	13

### Required Courses

Note: A placement examination exempts some students from taking CSCI 150. Those students take a CSCI course of 200 level or higher instead. CSCI 215E and 315E are writing classes and cannot be applied toward this certification.

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CSCI 150	Introduction to Programming	3
CSCI 151	Fund of Computer Science I	3
CSCI 152	Fund of Computer Science II	3
CSCI 232	Intermediate Data Structures and Algorithms	4
Total Hours		13

Minimum Required Grade: C-

## East Asian Studies

The East Asian Studies Major positions students to pursue graduate work in East Asian Studies as well as careers in academia, government, education, business, law, and any other discipline in which East Asian countries are key global players.

The program builds on a long history of institutional commitment to East Asia. Ambassador Mike Mansfield first taught Far Eastern History at the University of Montana from 1934-1942. UM has the strongest Japanese language program in the Northern Rockies, and has a 30-year history in teaching Mandarin Chinese. UM also maintains many exchange, research, and study abroad programs, including programs in Education, Law, Business and Journalism.

The East Asian Studies major provides UM students with a broad understanding of the major cultures of this dynamic region and gives students the freedom to tailor their studies to focus on China or Japan. The major requires a spread of courses to ensure that students receive training in the traditional cultures of the East Asian region, which represent major contributions to the world's philosophical and artistic systems. Students are able to choose from a variety of contemporary political, economic, and cultural courses to suit their goals.

To learn more about the East Asian Studies Major, contact the Director of the Mansfield Center, Deena Mansour, at [deena.mansour@umontana.edu](mailto:deena.mansour@umontana.edu).

## Undergraduate

- East Asian Studies B.A.



## East Asian Studies B.A.

### Bachelor of Arts - East Asian Studies

College of Humanities & Sciences

**Degree Specific Credits:** 44

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core Courses	6
Fundamentals	
Culture and Civilization	
Upper-Division Core Courses	18
Chinese Studies	
Japanese Studies	
East Asian Studies	
Language	20
Chinese Language	
Japanese Language	
Total Hours	44

### Lower-Division Core Courses

**Rule:** Complete the following subcategories. 6 total credits required.

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## Fundamentals

**Note:** On occasion the Modern and Classical Languages department offers an alternative Introduction to East Asian Studies course which could fulfill this requirement. Check with an advisor.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HSTR 240H	East Asian Civilizations	3
Total Hours		3

Minimum Required Grade: C-

## Culture and Civilization

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CHIN 211	Chinese Culture and Civiliz	
JPNS 150H	Japanese Cult & Civiliz	
Total Hours		3

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Complete the following subcategories. 18 total credits required.

### Chinese Studies

CODE	TITLE	HOURS
<b>Complete 2 courses in Chinese studies. See your advisor for courses that will complete this requirement.</b>		6

Minimum Required Grade: C-

### Japanese Studies

CODE	TITLE	HOURS
<b>Complete 2 courses in Japanese studies. See your advisor for courses that will complete this requirement.</b>		6

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Minimum Required Grade: C-

### East Asian Studies

CODE	TITLE	HOURS
Complete 2 courses in Japanese, Chinese, Viet Nam, pan-East Asia, or Buddhism studies. See your advisor for courses that will complete this requirement.		6

## Language

**Rule:** Complete one of the following subcategories. 20 total credits required.

### Chinese Language Option

CODE	TITLE	HOURS
Complete all of the following courses:		
CHIN 101	Elementary Chinese I	5
CHIN 102	Elementary Chinese II	5
CHIN 201	Intermediate Chinese I	5
CHIN 202	Intermediate Chinese II	5
Total Hours		20

Minimum Required Grade: C-

### Japanese Language Option

CODE	TITLE	HOURS
Complete all of the following courses:		
JPNS 101	Elementary Japanese I	5
JPNS 102	Elementary Japanese II	5
JPNS 201	Intermediate Japanese I	5
JPNS 202	Intermediate Japanese II	5
Total Hours		20

Minimum Required Grade: C-

## Economics Department

### **Matthew Taylor, Chair**

The department considers its teaching goals to be three-fold:

1. To present students with the basic theoretical tools of economic analysis, relevant facts and institutional material, which will assist them as civic leaders.
2. To introduce students majoring in economics to the various special fields of study within economics. This training, along with extensive work in the other liberal arts and sciences, is intended to instill breadth of intellectual interest, critical habits of thought, a problem-solving attitude and facility of expression.
3. To help meet, through graduate work, the increasing demands for competent professional economists in industry, commerce, government and education.

Courses cover general economic theory, environmental economics, monetary theory, international economics, public finance, labor economics, economic development, comparative economic systems, econometrics, and industrial organization.

Students major in economics leading to a Bachelor of Arts degree. Graduate work leads to a Master of Arts degree in economics (see Graduate School catalog).

## Baccalaureate Degrees

- Economics B.A.

## Undergraduate Minors

- Economics

## Economics B.A.

### Bachelor of Arts - Economics

#### College of Humanities & Sciences

**Degree Specific Credits:** 47-51

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Refer to graduation requirements listed previously in the catalog. See index.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core	6
Upper-Division Core	13
Upper-Division Electives	17
Non-Economics Required Courses	11-15
Teaching Economics Track	
Total Hours	47-51

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECNS 201S	Principles of Microeconomics	3
ECNS 202S	Principles of Macroeconomics	3
Total Hours		6

Minimum Required Grade: C-

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## Upper-Division Core

**Note:** ECNS 398 credits do not count toward the total credits requirement for the major. The upper-division writing requirement must be met by successfully completing ECNS 481.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECNS 301	Intermediate Micro with Calc	3
ECNS 302	Intermediate Macroeconomics	3
ECNS 403	Introduction to Econometrics	4
ECNS 481	Communicating Economics	3
Total Hours		13

Minimum Required Grade: C-

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## Upper-Division Electives

**Note:** ECNS 398 does NOT count toward the total required credits for the major.

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CODE	TITLE	HOURS
<b>Complete 17 credits of the following courses:</b>		17
ECNS 310	Intro Health Economics	
ECNS 312	Labor Economics	
ECNS 313	Money and Banking	
ECNS 320	Public Finance	
ECNS 325	Economics of Sports	
ECNS 391	Special Topics	
ECNS 405	Game Theory	
ECNS 406	Industrial Organization	
ECNS 431	International Trade	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ECNS 450	Adv. Topics in Economic Dev.	
ECNS 451	Behavioral and Experimental Economics	
ECNS 491	Special Topics	
ECNS 494	Senior Seminar	
FORS 320	Forest Environmental Economics	
GPHY 323S	Economic Geography of Rural Areas	
NRSM 425	Nat Res & Envir Economics	
PSCI 365	Pub Policy Issues and Analysis	
Total Hours		17

Minimum Required Grade: C-

### Non-Economics Required Courses

## University Of Montana

**Rule:** All courses are required.

**Note:** M 162 must be taken before ECNS 301. STAT 216 must be taken before ECNS 403. Students planning graduate study in economics should take M 171 and M 172 and consider M 221, M 307 and ECNS 511, ECNS 513 and ECNS 560.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 115	Probability and Linear Mathematics	3
M 171 & M 172	Calculus I and Calculus II	4-8
or M 162	Applied Calculus	
STAT 216	Introduction to Statistics (or equivalent)	4
Total Hours		11-15

Minimum Required Grade: C-

## Teaching Economics Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publication and are used for advising purposes only. You do not fill out a major change for a track.
- This major does not qualify as a single field endorsement. Individuals must complete the teaching track in a second major or minor in another content area.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.



CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach economics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Economics Minor

## Minor - Economics

College of Humanities & Sciences

**Degree Specific Credits:** 25

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core	6
Upper-Division Core	6
Upper-Division Electives	6
Non-Economics Required Courses	7
Teaching Economics Track	
Total Hours	25

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECNS 201S	Principles of Microeconomics	3
ECNS 202S	Principles of Macroeconomics	3
Total Hours		6

Minimum Required Grade: C-

### Upper-Division Core

## University Of Montana

**Note:** M 115 and M 162 should be taken before enrolling in ECNS 301.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECNS 301	Intermediate Micro with Calc	3
ECNS 302	Intermediate Macroeconomics	3
Total Hours		6

Minimum Required Grade: C-

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### Upper-Division Electives

**Note:** Students are required to complete STAT 216 (or equivalent) with a C- or better before enrolling in ECNS 403.

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
ECNS 310	Intro Health Economics	
ECNS 312	Labor Economics	
ECNS 313	Money and Banking	
ECNS 320	Public Finance	
ECNS 325	Economics of Sports	
ECNS 391	Special Topics	
ECNS 403	Introduction to Econometrics	
ECNS 405	Game Theory	
ECNS 406	Industrial Organization	
ECNS 431	International Trade	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ECNS 450	Adv. Topics in Economic Dev.	
ECNS 451	Behavioral and Experimental Economics	
ECNS 491	Special Topics	
Total Hours		6

Minimum Required Grade: C-

## Non-Economics Required Courses

**Note:** M 115 (or equivalent) and M 162 should be taken before enrolling in ECNS 301.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 115	Probability and Linear Mathematics	3
M 162	Applied Calculus	4
Total Hours		7

Minimum Required Grade: C-

## Teaching Economics Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Economics Track Required Course

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

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Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach economics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## English Department

### Judy Blunt, Chair

The Department of English is among the oldest and most prestigious units at the University. As one of the campus's original departments, it offered some of the University's inaugural courses, including literature classes taught by UM's first president, Oscar J. Craig. In 1919, Rhodes Scholar H.G. Merriam inaugurated one of the first creative writing programs in the country. Two recent Pulitzer Prize Winners - William Finnegan and Andrew Sean Greer - received their M.F.A.'s from the department. Now, more than a century old, this department offers the following degrees:

#### Bachelor of Arts with concentrations in

- Literature
- Creative Writing
- English Teaching
- Linguistics
- Literature and the Environment

#### Bachelor of Fine Arts in

- Creative Writing

#### Minors in

- English
- Irish Studies

#### Graduate degrees in

- Creative Writing (M.F.A.)
- Literature (M.A.)
- Teaching (M.A.)

Our Composition program serves the entire University by offering the first-year composition requirement WRIT 101 as well as courses in advanced composition and graduate seminars in the teaching of writing.

## Baccalaureate Degrees

- English B.A., Creative Writing Concentration
- English B.A., English Teaching Concentration
- English B.A., Linguistics Concentration
- English B.A., Literature Concentration

## University Of Montana

- English B.A., Literature and the Environment Concentration
- B.F.A in Creative Writing

## Undergraduate Minors

- English
- Irish Studies



## English B.A. - Creative Writing

The Creative Writing program is predicated on the model of the workshop, and focuses on three areas of study: poetry, fiction, and nonfiction. Undergraduates who select the creative writing concentration fulfill some of the same requirements as those in literature, while also participating in a series of small writing workshops, gaining the techniques needed to craft poetry and/or prose that work towards artistic excellence. Graduate students pursuing an M.F.A. degree complete a series of writing workshops and seminars designed to develop their creative work and expand their understanding of literary technique. The Creative Writing faculty is augmented each year by visiting Hugo and Kittredge fellows. The program sponsors the graduate literary magazine, *CutBank*, now in its fourth decade of publishing works of poetry, prose and art. Additionally, undergraduate students have the opportunity to contribute to and edit their own literary magazine, *The Oval*.

## Bachelor of Arts - English; Creative Writing Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 43-57

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Foundational Courses	21
Upper-Division Creative Writing Courses	12
Upper-Division English Electives	6
Modern or Classical Language major requirement	4-18
Total Hours	43-57

## Foundation Courses

CODE	TITLE	HOURS
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University Of Montana

<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
LIT 236L	Literary Histories	3
LIT 246L	Genres, Themes, Approaches	3
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
<b>Complete two of the following courses:</b>		6
CRWR 210A	Intro Fiction Workshop	
CRWR 211A	Intro Poetry Workshop	
CRWR 212A	Intro Nonfiction Workshop	
<p>Note: The Creative Writing faculty recommend students take more than one 200-level CRWR workshop to fulfill this requirement; however, students may substitute one of the following courses in lieu of a workshop. Other courses may be substituted at the discretion of the student s advisor.</p>		
CRWR 115L	Montana Writers Live	
CRWR 234	The Oval: Literary Mag	
CRWR 310	Intermediate Fiction Workshop (This is in addition to the 300-level workshop requirement.)	
or CRWR 311	Intermediate Poetry Workshop	
or CRWR 312A	Intermediate Nonfiction Workshop	
CRWR 391	Special Topics	
or CRWR 491	Special Topics	
CRWR 392	Independent Study	

or CRWR 492	Independent Study	
Total Hours		21

Minimum Required Grade: C

## Upper-Division Creative Writing Courses

**Rule:** Complete all categories.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
CRWR 310	Intermediate Fiction Workshop	
CRWR 311	Intermediate Poetry Workshop	
CRWR 312A	Intermediate Nonfiction Workshop	
<b>Optional: ONE of these courses may be substituted for an intermediate workshop:</b>		3
CRWR 320	The Art and Craft of Revision	
CRWR 322	Techniques of Modern Essay	
CRWR 391	Special Topics	
CRWR 425	Storytelling	
CRWR 491	Special Topics	
CRWR 410, 411, 412 may also substitute if not being used to fulfill the 400-level workshop requirement		
<b>Complete one of the following courses:</b>		3
CRWR 410	Advanced Fiction Workshop	
CRWR 411	Advanced Poetry Workshop	
CRWR 412	Advanced Nonfiction Workshop	
Total Hours		12

Minimum Required Grade: C

## Upper-Division English Electives

CODE	TITLE	HOURS
	<b>Complete two courses (6 credits) at the 300- or 400-level from offerings in LIT, IRSH, FILM, non-workshop CRWR courses or MCLL literature.</b>	6

Minimum Required Grade: C-

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## Modern & Classical Language Requirement

**Note:** Students may either take four sequential semesters (101, 102, 201, 202) of a modern or classical language or exemplify proficiency through examination (available through the Modern and Classical Languages and Literature Department).

CODE	TITLE	HOURS
	<b>Complete the 202-level proficiency in either a modern or classical language other than English.</b>	4-18

Minimum Required Grade: C-

## English B.A. - Linguistics

In conjunction with the Linguistics Program, English also offers a concentration in English Linguistics which provides a background in both literature and language. Students studying linguistics learn about the structure, history, and cultural influences in oral and written English language.

### Bachelor of Arts - English; Linguistics Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 40-54

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

English Core Courses	18
Upper-Division Requirements	18
Modern & Classical Language Requirement	4-18
Total Hours	40-54

### English Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
LIT 327	Shakespeare	3
<b>Complete 2 of the following courses:</b>		6
LIT 202L	The Environmental Imagination	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
<b>Complete 2 of the following courses:</b>		6
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
WGSS 491	Special Topics (Medieval Women Authors)	
Total Hours		18

Minimum Required Grade: C

## Upper-Division Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 465	Structure & History of English	3
LING 470	Linguistic Analysis	3
<b>Complete 2 of the following courses:</b>		6
LING 471	Phonetics and Phonology	
LING 472	Syntax	
LING 489	Morphology	
<b>Complete 2 of the following courses:</b>		6
LING 375X	Linguistic Ecology and Language Endangerment	
LING 473	Language and Culture	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
LING 477	Bilingualism	
LING 478	Learner Language	
LING 484	NA Indigenous Lang & Ling	
Total Hours		18

Minimum Required Grade: C-

## Modern & Classical Language Requirement

**Note:** All English majors who select the Linguistics concentration must complete four semesters of the same modern or classical language through the 202-level or demonstrate equivalent competency on a Foreign Language Placement Exam.

CODE	TITLE	HOURS
<b>Complete the 202-level proficiency in either a modern or classical language other than English.</b>		4-18

Minimum Required Grade: C-

## English B.A. - Literature

Under the Literature concentration, students ground their study of literature in a series of introductory courses in major themes and historical approaches, intermediate courses in Shakespeare and literary theory, and a senior seminar that requires the development of a research project. Students complement these core courses with a selection of electives that engage specific genres, authors, and periods, as well as different disciplines and literatures of diversity (e.g. Native American Literature). M.A. students select graduate seminars in American, British, and world literatures as well as other disciplines, their course work culminating in either a traditional thesis or a portfolio of seminar papers revised in collaboration with a committee. The Literature concentration imparts an understanding of not only the aesthetic richness of canonical and emerging literatures but also the historical and cultural forces that have contributed to their making. The classes are of a size that makes discussion an important part of a student's experience.

## Bachelor of Arts - English; Literature Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 40-54

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** English majors with the concentration in Literature must earn 36 of their total credits in Department of English courses.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

English Core Courses	15
Upper-Division Core Courses	12
Upper-Division English Electives	6
Literature Seminar Capstone	3
Modern or Classical Languages Requirement	4-18
Total Hours	40-54



## English Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
<b>Complete 2 of the following courses (note: you may take two sections of LIT 236L or LIT 246L if the course subtitles and content are different):</b>		6
LIT 202L	The Environmental Imagination	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
Total Hours		15

Minimum Required Grade: C

## Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete 4 of the following courses, with at least one being a 400-level course:</b>		12
LIT 301	Studies in Literary Forms	
LIT 304	U.S. Writers of Color	
LIT 305	Lit by & About Native Amer	
LIT 314	The American Novel	
LIT 315	Voices of the Am Renaissance	
LIT 331	Major Author/s	
LIT 342	Montana Writers	

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LIT 343	African American Lit	
LIT 344	Asian American Literature	
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
LIT 355	British Romanticism	
LIT 363	Modern Poetry	
LIT 369	Short Fiction	
LIT 370	Science Fiction	
LIT 373	Lit & Environment	
LIT 376	Lit & Other Disciplines	
LIT 378L	Gay and Lesbian Studies	
LIT 380	Literary Approaches to Drama	
LIT 391	Special Topics	
LIT 402	Literature in Place	
LIT 420	Critical Theory	
LIT 421	History of Criticism & Theory	
LIT 422	Ecocritical Theory & Practice	
LIT 430	Studies in Comparative Lit	
LIT 491	Special Topics	
Total Hours		12

Minimum Required Grade: C

## Upper-Division English Electives

CODE	TITLE	HOURS
<b>Complete any two upper-division courses from course prefixes: CRWR, IRSH, FILM, LING, LIT, or WRIT. All courses must be 300- or 400-level.</b>		6
Total Hours		6

Minimum Required Grade: C-

### Literature Seminar Capstone

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LIT 494	Seminar: Lit Capstone	3
Total Hours		3

Minimum Required Grade: C-

### Modern & Classical Language Requirement

**Note:** Students may either take four sequential semesters (101, 102, 201, 202) of a modern or classical language or exemplify proficiency through examination (available through the Modern and Classical Languages and Literature Department).

CODE	TITLE	HOURS
<b>Complete the 202-level proficiency in either a modern or classical language other than English.</b>		4-18

Minimum Required Grade: C-

## English B.A. - Literature and the Environment

### Bachelor of Arts - English; Literature & The Environment Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 40-54

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

English Core Courses	24
Upper-Division English Elective Courses	6
Senior Seminar	3
Modern & Classical Language Requirement	4-18
Approved Complementary Course	3
Total Hours	40-54

### English Core Courses

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
LIT 202L	The Environmental Imagination	3
LIT 236L	Literary Histories	3
or LIT 246L	Genres, Themes, Approaches	
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
LIT 373	Lit & Environment	3
LIT 402	Literature in Place	3
LIT 422	Ecocritical Theory & Practice	3
Total Hours		24

Minimum Required Grade: C-

### Upper-Division English Elective Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LIT 301	Studies in Literary Forms	
LIT 304	U.S. Writers of Color	
LIT 305	Lit by & About Native Amer	
LIT 314	The American Novel	
LIT 315	Voices of the Am Renaissance	
LIT 331	Major Author/s	
LIT 342	Montana Writers	

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LIT 343	African American Lit	
LIT 344	Asian American Literature	
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
LIT 355	British Romanticism	
LIT 363	Modern Poetry	
LIT 369	Short Fiction	
LIT 370	Science Fiction	
LIT 373	Lit & Environment	
LIT 376	Lit & Other Disciplines	
LIT 378L	Gay and Lesbian Studies	
LIT 380	Literary Approaches to Drama	
LIT 391	Special Topics	
LIT 402	Literature in Place	
LIT 420	Critical Theory	
LIT 421	History of Criticism & Theory	
LIT 422	Ecocritical Theory & Practice	
LIT 430	Studies in Comparative Lit	
LIT 491	Special Topics	
Total Hours		6

Minimum Required Grade: C-

**Senior Seminar**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LIT 494	Seminar: Lit Capstone	3
Total Hours		3

Minimum Required Grade: C-

### Modern & Classical Language Requirement

**Note:** Students may either take four sequential semesters (101, 102, 201, 202) of a modern or classical language or exemplify proficiency through examination (available through the Modern and Classical Languages and Literature Department).

CODE	TITLE	HOURS
<b>Complete the 202-level proficiency in either a modern or classical language other than English.</b>		4-18

Minimum Required Grade: C-

### Approved Complementary Course

CODE	TITLE	HOURS
<b>Complete an approved complementary course from a discipline other than English. See your advisor for a list of courses that fulfill this requirement.</b>		3

Minimum Required Grade: C-

## English B.A. - Teaching English

The English Teaching program provides content knowledge, pedagogy, and professional experiences required for teaching literacy in a democratic society. Based on current research and best practices, the English Teaching program integrates the study of language, literature, and media. The program creates learning communities and supports teachers as critical thinkers, creative problem solvers, and reflective practitioners. Students who successfully complete this concentration and the requirements from the College of Education receive both a B.A. in English and a secondary teaching license (grades 5-12) in English. At the graduate level, the English Teaching program offers advanced theory and pedagogy courses, culminating in an M.A. in English. The English Teaching Program is also the home of the Montana Writing Project, which is dedicated to improving the teaching and learning of writing at all grade levels and offers a special focus on meeting the state-mandated Indian Education for All. Graduates of the program have become Montana Teachers of the Year and National Board of Certified Teachers.

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - English; Teaching English Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 46-50

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary



## University Of Montana

English Core Courses	15
Upper-Division Literature Courses	6
English Teaching Courses	15
English Electives	6
Modern & Classical Language Requirement	4-8
Total Hours	46-50

### English Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
or CRWR 211A	Intro Poetry Workshop	
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
<b>Complete two of the following courses:</b>		6
LIT 202L	The Environmental Imagination	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
Total Hours		15

Minimum Required Grade: C

### Upper-Division Literature Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LIT 301	Studies in Literary Forms	

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LIT 304	U.S. Writers of Color	
LIT 305	Lit by & About Native Amer	
LIT 314	The American Novel	
LIT 315	Voices of the Am Renaissance	
LIT 331	Major Author/s	
LIT 342	Montana Writers	
LIT 343	African American Lit	
LIT 344	Asian American Literature	
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
LIT 355	British Romanticism	
LIT 363	Modern Poetry	
LIT 369	Short Fiction	
LIT 370	Science Fiction	
LIT 373	Lit & Environment	
LIT 376	Lit & Other Disciplines	
LIT 378L	Gay and Lesbian Studies	
LIT 380	Literary Approaches to Drama	
LIT 391	Special Topics	
LIT 402	Literature in Place	
LIT 420	Critical Theory	
LIT 421	History of Criticism & Theory	
LIT 422	Ecocritical Theory & Practice	

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LIT 430	Studies in Comparative Lit	
LIT 491	Special Topics	
Total Hours		6

Minimum Required Grade: C-

## English Teaching Courses

**Note:** Students must be admitted to the Teacher Education program prior to enrolling in ENT 440, ENT 441, and ENT 442. Other EDU pre-/co-requisites also apply to ENT 440, ENT 441, and ENT 442.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENT 439	Studies in Young Adult Lit	3
ENT 440	Teaching Writing	3
ENT 441	Tchg Rdng & Literature	3
ENT 442	Tchg Oral Lang & Media Lit	3
<b>Complete one of the following courses:</b>		3
LING 270S	Intro to Linguistics	
LING 465	Structure & History of English	
LING 470	Linguistic Analysis	
Total Hours		15

Minimum Required Grade: C-

## English Electives

CODE	TITLE	HOURS
<b>Complete two courses (6 credits) in ENT, LIT, CRWR, FILM, IRSH, or WRIT (above WRIT 101 College Writing I).</b>		6

Minimum Required Grade: C-

## Modern & Classical Language Requirement

**Note:** Students need to take one year (two semesters) of a modern or classical language or exemplify proficiency through examination (available through the Modern and Classical Languages and Literature Department).

CODE	TITLE	HOURS
	<b>Complete the first year-level proficiency in either a modern or classical language other than English.</b>	4-8

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach English, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Creative Writing B.F.A.

## Bachelor of Fine Arts - Creative Writing

College of Humanities & Sciences

**Degree Specific Credits:** 46-57

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Core Courses	21
Upper-Division Electives	9
Upper-Division Creative Writing Courses	9
Capstone	3
Modern or Classical Language Major Requirement	4-18
Total Hours	46-57

### Core Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LIT 110L	Intro to Lit	3
<b>Complete two of the following courses:</b>		6
LIT 202	The Environmental Imagination	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
LIT 291	Special Topics	
<b>Complete two of the following courses:</b>		6
CRWR 210A	Intro Fiction Workshop	
CRWR 211A	Intro Poetry Workshop	
CRWR 212A	Intro Nonfiction Workshop	
<b>Complete all of the following courses:</b>		
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
Total Hours		21

Minimum Required Grade: C

## Upper-Division Electives

CODE	HOURS
<b>Complete two LIT courses (6 credits) at the 300- or 400-level.</b>	6
<b>Complete one course (3 credits) at the 300- or 400-level from offerings in LIT, IRSH, FILM, non-workshop CRWR courses or MCLL literature.</b>	3
Total Credits	9

Minimum Required Grade: C-

## Upper-Division Creative Writing Courses

**Rule:** One of these courses must be a 300-level workshop

CODE	TITLE	HOURS
<b>Complete 3 of the following courses:</b>		9
CRWR 310	Intermediate Fiction Workshop	
CRWR 311	Intermediate Poetry Workshop	
CRWR 312A	Intermediate Nonfiction Workshop	
CRWR 320	The Art and Craft of Revision	
CRWR 322	Techniques of Modern Essay	
CRWR 391	Special Topics	
CRWR 425	Storytelling	
CRWR 491	Special Topics	
Total Hours		9

Minimum Required Grade: C

## Capstone

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CRWR 481	Poetry Workshop	
CRWR 482	Nonfiction Workshop	
CRWR 483	Fiction Workshop	
Total Hours		3

Minimum Required Grade: C

## Language Requirement

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**Note:** Students may either take four sequential semesters (101, 102, 201, 202) of a modern or classical language or exemplify proficiency through examination (available through the World Languages and Cultures Department).

CODE	TITLE	HOURS
	<b>Complete the 202-level proficiency in either a modern or classical language other than English.</b>	4-18

Minimum Required Grade: C-



# English Minor

## Minor in English

### College of Humanities & Sciences

**Degree Specific Credits:** Standard Track: 18; Teaching English Track: 40-48

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** English minors must earn at least 18 credits within the English Department (excluding WRIT courses).

## Summary

English Minor - Standard Track	18
Foundational Courses	
Focus Courses	
English Minor - Teaching English Track	40-48
Teaching English Track Core Courses	
Teaching English Track Upper-Division Literature Courses	
Teaching English Track English Teaching Courses	
Teaching English Track Modern & Classical Language Requirement	

## English Minor - Standard Track

**Note:** 18 total credits required.

### Foundational Courses

CODE	TITLE	HOURS
Complete any two 200-level courses with LIT or CRWR prefixes.		6

Minimum Required Grade: C-

### Focus Courses

**Note:** Some of these upper-division courses carry prerequisites, so students should select lower- and upper-division courses carefully to ensure those prerequisites are met. Students wishing to enroll in 300- or 400-level CRWR workshops (CRWR 310/CRWR 311/CRWR 312A/CRWR 410/CRWR 411/CRWR 412) must complete the 200-level CRWR pre-requisite. CRWR 410/CRWR 411/CRWR 412 also require a writing submission for consent of instructor. Students wishing to enroll in upper-division LIT courses need to take 6 credits of LIT at the 200-level, LIT 300, and/or receive consent of instructor.

CODE	TITLE	HOURS
<b>Complete any four upper-division English elective courses with the prefixes LIT, IRSH, FILM, or CRWR.</b>		12

Minimum Required Grade: C-

## English Minor - Teaching English Track

The English Teaching program provides content knowledge, pedagogy, and professional experiences required for teaching literacy in a democratic society. Based on current research and best practices, the English Teaching program integrates the study of language, literature, and media, creating learning communities and supporting teachers as critical thinkers, creative problem solvers, and reflective practitioners. Students who successfully complete this option and the requirements from the College of Education receive a secondary teaching license (grades 5-12) in English. The English Teaching Program is also the home of the Montana Writing Project, which is dedicated to improving the teaching and learning of writing at all grade levels and offers a special focus on meeting the state-mandated Indian Education for All.

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another content area.
- To complete the English Teaching Track, a student must earn 36 credits within the English Department.

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## Teaching English Track Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L	Intro to Lit	3
or CRWR 211A	Intro Poetry Workshop	
LIT 300	Literary Criticism	3
LIT 327	Shakespeare	3
<b>Complete two of the following courses:</b>		6
LIT 202L	The Environmental Imagination	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
Total Hours		15

Minimum Required Grade: C

## Teaching English Track Upper-Division Literature Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LIT 301	Studies in Literary Forms	
LIT 304	U.S. Writers of Color	
LIT 305	Lit by & About Native Amer	
LIT 314	The American Novel	
LIT 315	Voices of the Am Renaissance	
LIT 331	Major Author/s	
LIT 342	Montana Writers	
LIT 343	African American Lit	

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LIT 344	Asian American Literature	
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
LIT 355	British Romanticism	
LIT 363	Modern Poetry	
LIT 369	Short Fiction	
LIT 370	Science Fiction	
LIT 373	Lit & Environment	
LIT 376	Lit & Other Disciplines	
LIT 378L	Gay and Lesbian Studies	
LIT 380	Literary Approaches to Drama	
LIT 391	Special Topics	
LIT 402	Literature in Place	
LIT 420	Critical Theory	
LIT 421	History of Criticism & Theory	
LIT 422	Ecocritical Theory & Practice	
LIT 430	Studies in Comparative Lit	
LIT 491	Special Topics	
Total Hours		6

Minimum Required Grade: C-

### Teaching English Track Courses

**Note:** Students must be admitted to the Teacher Education program prior to enrolling in ENT 440, ENT 441, and ENT 442. Other EDU pre-/co-requisites also apply to ENT 440, ENT 441, and ENT 442.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENT 439	Studies in Young Adult Lit	3
ENT 440	Teaching Writing	3
ENT 441	Tchg Rdng & Literature	3
ENT 442	Tchg Oral Lang & Media Lit	3
<b>Complete one of the following courses:</b>		3
LING 270S	Intro to Linguistics	
LING 465	Structure & History of English	
LING 470	Linguistic Analysis	
Total Hours		15

Minimum Required Grade: C-

### Teaching English Track Modern & Classical Language Requirement

**Note:** Students need to take one year (two semesters) of a modern or classical language or exemplify proficiency through examination (available through the Modern and Classical Languages and Literature Department).

CODE	TITLE	HOURS
<b>Complete the first year-level proficiency in either a modern or classical language other than English.</b>		4-8

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach English, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Irish Studies Minor

The Department of English offers an interdisciplinary minor in Irish Studies, which provides students access to instruction in Irish language, history, literature, and culture. This academic and artistic approach to Irish culture involves an interdisciplinary and inter-collegiate collaboration that brings together leading scholars in the humanities and the creative arts.

### Minor - Irish Studies

#### College of Humanities & Sciences

**Degree Specific Credits:** 20

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Irish Studies students must earn at least 18 credits. These credits will include both the required coursework and electives.

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### Summary

Foundational Courses	11
Irish Literature Course	3
Minor Electives	6
Total Hours	20

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### Foundational Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
IRSH 101	Elementary Irish	4
IRSH 102	Elementary Irish II	4
<b>Complete one of the following courses:</b>		3
IRSH 249	The Irish	
IRSH 345L	Literature in the Irish Lang	
IRSH 360	Irish/N Irish Literature	
Total Hours		11

Minimum Required Grade: C-

## Irish Literature Course

**Note:** LIT 331 can count for the Irish Studies minor when the course focuses on an Irish author (e.g. James Joyce).

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
IRSH 345L	Literature in the Irish Lang	
IRSH 360	Irish/N Irish Literature	
IRSH 380	Topics in Irish Studies	
IRSH 491	Special Topics	
LIT 331	Major Author/s	
Total Hours		3

Minimum Required Grade: C-

## Minor Electives

**Notes:**

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- Irish Theater is offered intermittently through the College of Visual and Performing Arts as THTR 391.
- Students who wish to continue with Irish language through the 202 level may do so, but only Irish language IRSH 103 and IRSH 201 can count for minor electives.
- LIT 376 & LIT 391 may count toward the Irish Studies minor when the topics cover Irish themes, content, and literature.

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
DANC 160A	Dance Forms: Irish	
IRSH 103	Elementary Irish III	
IRSH 201	Intermediate Irish I	
IRSH 380	Topics in Irish Studies	
IRSH 391	Special topics	
IRSH 492	Independent Study	
LIT 376	Lit & Other Disciplines	
LIT 391	Special Topics	
THTR 391	Special Topics/Exprmtl Courses	
Total Hours		6

Minimum Required Grade: C-



# Environmental Studies

## Robin Saha, Director

The Environmental Studies Program (EVST) seeks to provide students with the literacy, skills and commitment needed to foster a healthy natural environment and to create a more sustainable, equitable, and peaceful world. To these ends, the EVST program educates and challenges students to become knowledgeable, motivated, and engaged in environmental affairs. Our students acquire the skills and awareness to promote positive social change and improve the environment and communities of Montana and the world, for current and future generations. Our program is organized upon the following principles:

- Environmental studies require an interdisciplinary approach that integrates the natural sciences, social sciences, and humanities.
- Creating solutions to environmental problems requires enterprise and performance as well as reflection; therefore, an effective environmental education generates thinkers who can do as well as doers who can think.
- It is important to provide both classroom and experiential learning opportunities in the arts and responsibilities of democratic citizenship, including communication, collaboration, and committed civic participation.
- Students should be co-creators of their educational experience.

**High School Preparation:** Students in high school who are planning to major in environmental studies should take their school's college preparatory curriculum. Courses in biology, chemistry, math through pre-calculus, and writing are recommended.

## Degrees

The Environmental Studies Program offers two degrees: a B.A. in Environmental Studies and a B.S. in Sustainability Science and Practice.

The Environmental Studies major offers students studies in natural science (environmental science, ecology, chemistry, ethnobotany and statistics), social science (community sociology, politics, environmental law) and humanities (ethics, history, native culture, literature and writing) to develop a base of knowledge to address the multiple dimensions of environmental problems and solutions. Students are encouraged to specialize in one of those areas through completion of a focus area, minor or double major. The Environmental Studies major builds skills in the areas of environmental ethics, community organizing, sustainable agriculture, traditional knowledge, environmental policy and law, environmental justice, and writing. Several experiential learning opportunities provide hands-on learning.

Sustainability science is defined as study of the interaction of natural and social systems, how those interactions impact sustainability and the implementation of solutions. It is defined by the problems it addresses rather than the fields it encompasses. The Sustainability Science and Practice major therefore offers a strong grounding in natural science coupled with social science to build skills and knowledge to put sustainability into practice. Through advising students can choose to complete electives to develop strength in an area of sustainability science to address problems or solutions such as pollution, waste, energy generation and transmission, agroecology, and environmental and community health. Students gain skills and experience implementing solutions as part of the degree. The major also addresses the integration of traditional ecological knowledge into sustainability practice.

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## **Baccalaureate Degrees**

- Environmental Studies B.A.
- Sustainability Science and Practice B.S.

## **Undergraduate Minors**

- Environmental Studies

## **Undergraduate Certificates**

- Certificate in Community Agriculture
- Certificate in Sustainable Agriculture and Food Systems

University Of Montana

# Environmental Studies B.A.

## Bachelor of Arts - Environmental Studies

College of Humanities & Sciences

**Degree Specific Credits:** 52

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To obtain depth of knowledge in an area of focus, students are expected to select a minor or double major from another campus discipline, or work with an Environmental Studies advisor to select or design an Environmental Studies focus area.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	25
Environmental Science and Environmental Studies	
Chemistry	
Math	
Biology	
Quantitative Skills - Statistics	
Upper-Division Core Courses	12
Natural Science - Ecology	
Policy	
Humanities	
Social Science	
Approved Community Service/Internship Experience	
Elective Environmental Studies Courses	9
Additional Requirements	6
Native American Studies	
Additional Science Course	
Total Hours	52

### Lower-Division Core Courses

**Rule:** Complete the following subcategories of courses. 24 total credits required.

#### **Environmental Science and Environmental Studies**

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENSC 105N	Environmental Science	3
ENST 201	Environmental Info Resources	3
ENST 225S	Sustainable Communities	3
ENST 230H	Nature and Society	3
Total Hours		12

Minimum Required Grade: C-

**Chemistry**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		4

Minimum Required Grade: C-

**Math**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
M 115	Probability and Linear Mathematics	3
Total Hours		3

Minimum Required Grade: C-

**Biology**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
BIOB 101N	Discover Biology	
BIOB 160N	Principles of Living Systems	
BIOB 170N	Princpls Biological Diversity	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Quantitative Skills - Statistics**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
FORS 201	Forest Biometrics	
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Upper-Division Core Courses**

**Rule:** Complete the following subcategories of courses. 15 total credits required.

**Natural Science - Ecology**

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
ENSC 360	Applied Ecology	
FORS 330	Forest Ecology	
Total Hours		3

Minimum Required Grade: C-

**Policy**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ENST 367	Environmental Politics & Policies	
ENST 382	Environmental Law	
Total Hours		3

Minimum Required Grade: C-

**Humanities**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ENST 335L	The Environmental Vision	
ENST 410	TEK of Indigenous Peoples	
ENST 430	Culture & Agriculture	
Total Hours		3

Minimum Required Grade: C-

**Social Science**

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ENST 310	Environment Montana: A to Z	
ENST 489S	Environmental Justice Issues & Solutions	
Total Hours		3

Minimum Required Grade: C-

### Approved Community Service/Internship Experience

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
ENSC 398	Cooperative Education/Intern	
ENST 396	Supervised Internship (PEAS)	
ENST 398	Cooperative Education/Intern	
Total Hours		3

Minimum Required Grade: C-

### Elective Environmental Studies Courses

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 349	Communication, Consumption, and Climate	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ENSC 391	Special Topics/Experimental Courses	
ENSC 491	Special Topics/Experimental Courses	
ENSC 492	Independent Study	



## University Of Montana

ENSC 494	Seminar/Workshop	
ENSC 495	Field Study	
ENST 320E	Earth Ethics	
ENST 373A	Nature Works	
ENST 391	Special Topics/Experimental Courses	
ENST 395	Field Studies: Env. Studies	
ENST 396	Supervised Internship (PEAS)	
ENST 420	US Environmental Movement	
ENST 427	Social Issues:The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
ENST 472	Gen Sci: Conservation Education	
ENST 476	Community Sustainability in Practice	
ENST 480	Food Justice and Sustainability	
ENST 491	Special Topics/Experimental Courses	
ENST 492	Independent Study	
ENST 493	Study Abroad: Environmental Justice Latin America	
ENST 494	Seminar/Workshop	
ENST 499	Senior Thesis/Capstone	
GPHY 421	Sustainable Cities	
PHL 323	Ethics of Climate Change	
Total Hours		9

Minimum Required Grade: C-

### Additional Requirements

**Rule:** Complete the following subcategories of courses. 6 total credits required.

**Native American Studies**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ENST 410	TEK of Native Peoples	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 304E	Native American Beliefs/Philos	
Total Hours		3

Minimum Required Grade: C-

**Additional Science Course**

**Note:** BIOB 170N may only be used to satisfy this requirement if not used to satisfy the introductory Biology requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 170N	Princpls Biological Diversity	
BIOO 335	Rocky Mountain Flora	
CCS 103X	Intro Climate Change:Sci & Soc	
ERTH 303N	Weather and Climate	
NRSM 210N	Soils, Water and Climate	
NRSM 265	Elements of Ecological Restoration	
NRSM 385	Watershed Hydrology	
Total Hours		3

Minimum Required Grade: C-

# Sustainability Science and Practice B.S.

## Bachelor of Science - Sustainability Science and Practice

College of Humanities & Sciences

**Degree Specific Credits:** 52

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Sustainability Knowledge and Science		27
Sustainability Theory		9
Analysis, Research, and Integrative Thinking		10
Sustainability in Practice: Internship		3
Sustainability in Practice: Capstone Experience		3
Total Hours		52

### Sustainability Knowledge and Science

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENSC 105N	Environmental Science	3
BIOB 160N or BIOB 170N	Principles of Living Systems or Principles of Biological Diversity	3

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GEO 103N	Introduction to Environmental Geology	3
CHMY 121N	Introduction to General Chemistry	3
NRSM 281	Science of Climate Change	3
ENSC 360	Applied Ecology	3
ENST 410	TEK of Indigenous Peoples	3
<b>Sustainability Knowledge and Science Electives - Complete 2 of the following courses:</b>		6
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
ENSC 470	Agroecology	
ERTH 303N	Weather and Climate	
GEO 318	Earth's Changing Climate	
GEO 327	Geochemistry	
GEO 420	Hydrogeology	
NRSM 265	Elements of Ecological Restoration	
NRSM 385	Watershed Hydrology	
NRSM 408	Global Cycles and Climate	
NRSM 418	Ecosystem Climatology	
NRSM 465	Restoration Ecology	
STAT 451	Statistical Methods I	
Total Hours		27

Minimum Required Grade: C-

### Sustainability Theory

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENST 225S	Sustainable Communities	3
COMX 349	Community Climate and Consumption	3
<b>Sustainability Theory Electives - Complete 1 of the following courses:</b>		3
ECNS 433	Economics of the Environment	
ENST 310	Environment Montana: A-Z	
ENST 480	Food Justice and Sustainability	
ENST 489S	Environmental Justice Issues & Solutions	
GPHY 433	Community Resilience	
Total Hours		9

Minimum Required Grade: C-

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### Analysis, Research, and Integrative Thinking

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENST 201	Environmental Information Resources	3
STAT 216	Introduction to Statistics	4
<b>Complete 1 of the following courses:</b>		3
BGEN 445	Sustainability Reporting	
GPHY 284 or FORS 250	Intro to GIS and Cartography or Intro to GIS for Forest Management	
GPHY 465	Planning Principles and Policies	
GPHY 466	Environmental Planning	
Total Hours		10

Minimum Required Grade: C-

## Sustainability in Practice: Internship

**Notes:**

- 3 credits are required; 6 are recommended.
- Other internships may be used to complete this requirement at the discretion of the program director.

CODE	TITLE	HOURS
<b>Complete 1 of the following courses:</b>		3
ENST 396	Supervised Internship (PEAS)	
ENST 398	Cooperative Education/Internship	
Total Hours		3

Minimum Required Grade: C-

## Sustainability in Practice: Capstone Experience

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
ENST 476	Community Sustainability in Practice	3
Total Hours		3

Minimum Required Grade: C-

# Environmental Studies Minor

## Minor - Environmental Studies

College of Humanities & Sciences

**Degree Specific Credits:** 25

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Lower-Division Core Courses	9
Upper-Division Electives	16
Environmental Studies	
Ecology	
Total Hours	25

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### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENSC 105N	Environmental Science	3
ENST 225S	Sustainable Communities	3
ENST 230H	Nature and Society	3
Total Hours		9

Minimum Required Grade: C-

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### Upper-Division Electives



# University Of Montana

**Rule:** Complete the following subcategories of courses. 16 total credits required.

## Environmental Studies

CODE	TITLE	HOURS
<b>Complete 13 credits of the following courses:</b>		13
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 349	Communication, Consumption, and Climate	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ENSC 398	Cooperative Education/Intern	
ENSC 491	Special Topics/Experimental Courses	
ENSC 492	Independent Study	
ENSC 495	Field Study	
ENST 310	Environment Montana: A to Z	
ENST 320E	Earth Ethics	
ENST 335L	The Environmental Vision	
ENST 367	Environmental Politics & Policies	
ENST 373A	Nature Works	
ENST 382	Environmental Law	
ENST 391	Special Topics/Experimental Courses	
ENST 395	Field Studies: Env. Studies	
ENST 396	Supervised Internship (PEAS)	
ENST 398	Cooperative Education/Intern	
ENST 420	US Environmental Movement	
ENST 427	Social Issues:The Mekong Delta	
ENST 430	Culture & Agriculture	

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ENST 437	Climate Change: Mekong Delta	
ENST 472	Gen Sci: Conservation Education	
ENST 476	Community Sustainability in Practice	
ENST 480	Food Justice and Sustainability	
ENST 489S	Environmental Justice Issues & Solutions	
ENST 491	Special Topics/Experimental Courses	
ENST 492	Independent Study	
ENST 493	Study Abroad: Environmental Justice Latin America	
ENST 494	Seminar/Workshop	
ENST 499	Senior Thesis/Capstone	
GPHY 421	Sustainable Cities	
PHL 323	Ethics of Climate Change	
Total Hours		13

Minimum Required Grade: C-

**Ecology**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 172N	Introductory Ecology	
BIOE 370	General Ecology	
ENSC 360	Applied Ecology	
FORS 330	Forest Ecology	
Total Hours		3

Minimum Required Grade: C-

## Community Agriculture Certificate

The Certificate in Community Agriculture develops participants' knowledge and skills to effectively participate in or manage urban/community farms that combine food production with a focus on addressing economic, health, and/or social justice concerns.

**Note:** Students must achieve at least an overall grade point average of 3.0 for courses within the certificate program. The certificate will only be awarded upon the successful completion of all requirements and the attainment of an undergraduate degree.

## Post-Secondary Certificate - Community Agriculture

### College of Humanities & Sciences

**Degree Specifics:** 21

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Summary

Required Courses	18
Elective Courses	3
Total Hours	21

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENST 396	Supervised Internship (PEAS)	6
ENST 398	Cooperative Education/Intern	6
ENST 430	Culture & Agriculture	3
ENST 480	Food Justice and Sustainability	3
Total Hours		18

Minimum required grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete a 3-credit course on social organization, social factors influencing human behavior, and/or the practice of facilitating and leading groups. Advisor approval of course selection is required.</b>		3
S W 300	Hum Behav & Soc Environ	
SOCI 350	The Community	
Total Hours		3

Minimum required grade: C-

## Environmental Justice Certificate

The Certificate in Environmental Justice offers students an integrated social science and humanities approach for understanding, analyzing and problem-solving around domestic and international environmental inequalities and injustices.

### Post-secondary Certificate -Environmental Justice

#### College of Humanities & Sciences

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

Required Courses	6
Electives	9
Total Hours	15

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENST 410	TEK of Indigenous Peoples	3
ENST 489S	Environmental Justice Issues & Solutions	3
Total Hours		6

Minimum Required Grade: C-

#### Electives

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9

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ANTY 323X	Native Peoples of Montana	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
BGEN 445	Sustainability Reporting	
CHTH 355	Theory and Practice of Community Health Education	
ENST 320E	Earth Ethics	
ENST 398	Internship	
ENST 427	Social Issues of the Mekong Delta	
ENST 487	Globalization, Justice, and the Environment	
GPHY 284	Intro to GIS and Cartography	
GPHY 433	Community Resilience	
GPHY 468	Community & Regional Analysis	
HSTA 344	African-American Struggle for Equality	
NASX 304E	Native American Beliefs/Philosophy	
NASX 475	Tribal Sovereignty	
NRSM 349E	Climate Change Ethics/Policy	
PHAR 320	American Indian Health Issues	
PHL 422	Environmental Philosophy	
PSCI 431	Politics of Global Migration	
PSCI 463	Development Administration	
PUBH 325	Environmental and Occupational Health	
SOCI 220S	Race, Gender & Class	
SOCI 318	Sociological Research Methods	
SOCI 325	Social Stratification	
WGSS 363	Feminist Theory and Methods	

Minimum Required Grade: C-

## Environmental and Nature Writing Certificate

The Certificate in Environmental and Nature Writing (ENW) offers students multiple course opportunities to practice and improve their understanding of and skills in writing about nature and the environment, as well as in evaluating and critiquing such writing. It provides hands-on internship experiences with a biannual environmental literary journal and an annual community reading series, both run by EVST graduate students and advised by EVST faculty.

### College of Humanities & Sciences

**Degree Specific Credits: 12**

**Required Cumulative GPA: 3.0**

**Catalog Year: 2021-22**

### Summary

Required Courses	9
Electives	3
Total Hours	15

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENST 335L	The Environmental Vision	3
ENST 373A	Nature Works	3
ENST 398	Cooperative Education/Internship	3
Total Hours		9

Minimum Required Grade: C-

### Electives

**Note:** to register for ENST 573 and ENST 594, students must have senior standing, a 3.0 GPA, and instructor permission.

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ENST 320E	Earth Ethics	
ENST 430	Culture and Agriculture	
ENST 573	Environmental Writing	
ENST 594	Graduate Seminar	
COMX 347	Rhetoric, Nature, and Environmentalism	
CRWR 212A	Intro to Nonfiction Workshop	
CRWR 312A	Intermediate Nonfiction Workshop	
CRWR 412	Advanced Nonfiction Workshop	
JRNL 170	Elements of News Writing	
Total Hours		<b>3</b>

Minimum Required Grade: C-



# Indigenous Knowledge and Environmental Sustainability Certificate

The Certificate in Indigenous Knowledge and Environmental Sustainability focuses on examining the relationship between Indigenous communities and their environments. This includes understanding how Indigenous communities are working to restore their Native landscapes, reestablish sustainable practices, and revitalize ethnobotanical knowledge and traditional food systems.

## Post-secondary Certificate - Indigenous Knowledge and Environmental Sustainability

College of Humanities & Sciences

**Degree Specific Credits: 12**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Required Courses	6
Elective Courses	6
Total Hours	12

### Required Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ENST 410	TEK of Native Peoples	3
<b>Complete one of the following courses:</b>		3
ENSC 396	Supervised Internship: Native Plant Stewardship and Ethnobotany	
ENSC 398	Cooperative Education/Internship	
Total Hours		6

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Minimum Required Grade: C-

**Elective Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete two of the following courses:</b>		<b>6</b>
ENSC 491	Special Topics/Experimental Courses	
ENSC 492	Independent Study	
ENSC 494	Seminar/Workshop	
ENSC 495	Field Study	
ENST 420	US Environmental Movement	
ENST 430	Culture & Agriculture	
ENST 472	Gen Sci: Conservation Education	
ENST 476	Community Sustainability in Practice	
ENST 480	Food Justice and Sustainability	
ENST 489S	Environmental Justice Issues & Solutions	
ENST 491	Special Topics/Experimental Courses	
ENST 492	Independent Study	
ENST 494	Seminar/Workshop	
ENST 499	Senior Thesis/Capstone	
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

## Sustainable Agriculture and Food Systems Certificate

The Certificate in Sustainable Agriculture and Food Systems helps prepare students to effectively build a more sustainable agriculture and food system for current and future generations. Students develop their knowledge and skills through upper-division courses that emphasize systems thinking, interdisciplinary study, civic engagement, and experiential, service learning at the campus-community PEAS farm.

**Note:** Students must achieve at least an overall grade point average of 3.0 for courses within the certificate program. The certificate will only be awarded upon the successful completion of all requirements and the attainment of an undergraduate degree.

## Post-Secondary Certificate - Sustainable Agriculture and Food Systems

College of Humanities & Sciences

**Degree Specifics:** 15

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

### Summary

Required Courses	15
Total Hours	15

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ENSC 470	Agroecology	3
ENST 396	Supervised Internship (PEAS)	6
ENST 430	Culture & Agriculture	3
ENST 480	Food Justice and Sustainability	3
Total Hours		15

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Minimum required grade: C-

## Geosciences Department

### **Andrew Wilcox, Chair**

Human impact on Earth systems and reliance on Earth's resources will increase as human population and economic production grows. These impacts are creating global grand challenges : complex, globally important problems that require an interdisciplinary approach. The most pressing grand challenges over the next decade will be resource scarcity/depletion (especially water and petroleum), adaptation to and mitigation of climate change and natural hazards, and environmental stewardship of highly stressed physical and biological Earth systems. As University of Montana Geoscientists, we address these challenges in our research and teaching. We develop the knowledge to find and extract mineral and water resources, solve problems caused by using those resources and develop models of the past, present and future Earth. Faculty, staff, graduate students, and undergraduate students are helping Montana and the World develop a sustainable future.

### **Our Vision:**

We will build and teach a fundamental understanding of Earth processes to benefit humankind and sustain Earth systems.

### **Our Goals:**

1. Conduct geoscience research, including obtaining extramural funding to perform essential and transformative research.
2. Disseminate research findings by publishing in peer-reviewed journals and presenting at national and international scientific conferences.
3. Teach students how to learn from known sources of information and create new knowledge from their own research.
4. Engage all graduate students and selected undergraduates in research and publication.
5. Produce graduates competent in their disciplines who can perform well in field, laboratory and computational settings, and who are prepared to serve as high-quality professionals in geoscience and related fields.
6. Provide opportunities for students to work and learn in other countries through international research and learning opportunities.
7. Educate the general student population about the nature of science and basic scientific principles through the study of Earth and its natural systems.
8. Engage the public with important geoscience issues through outreach and community education.

## UM Geosciences in the National Context

With B.S., M.S. and Ph.D. degrees, UM Geosciences is one of 120 Ph.D. granting Geoscience departments in the United States. U.S. News & World Report ranks the UM Geosciences program with Universities like Florida State, Michigan Tech, University of Georgia, University of Pennsylvania, and University of South

## University Of Montana

Carolina. We are ranked above schools like University of Idaho, University of Missouri, UNLV, and Notre Dame.

## Employment

Geoscientists completing our program are employed by private industry, federal, state, and local governmental agencies, environmental consulting firms, non-profit organizations, and by schools needing Earth Science teachers. Jobs in geosciences are available at the B.S., M.S. and Ph.D. levels. The M.S. degree is considered the main working professional degree. The Ph.D. degree is required for positions at universities and with organizations specializing in research. However, there are ample opportunities for geoscience employment with the B.S. degree. Our graduates have a wide range of educational and employment opportunities. Over the last decade, 95% of our graduate program alumni are employed in Geosciences:

- 13% work for government,
- 23% for industry,
- 31% for consultancies and
- 2% for non-governmental organizations,
- 10% are teaching, and
- 17% went on for a Ph.D.

UM Geosciences graduates have exceptional placement rates.

## Undergraduate Degree Requirements

We offer three Bachelor of Science degrees:

- Geosciences B.S.,
- International Field Geosciences Joint B.S. with University of Cork (Ireland), and
- International Field Geosciences Dual B.S. with Potsdam University (Germany).

We also offer an option in Earth Science Education.

The Upper-division Writing Expectation must be met for all degree options by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog or by completing GEO 499.

## Baccalaureate Degrees

- Geosciences B.S.
- Geosciences B.S., Earth Science Education Concentration
- International Field Geosciences Dual B.S.

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- International Field Geosciences Joint B.S.

## **Undergraduate Minors**

- Geosciences

# Geosciences B.S.

## Bachelor of Science - Geosciences

### College of Humanities & Sciences

**Degree Specific Credits: 54**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** This degree is designed for students who seek post-graduate employment as a professional geoscientist or preparation for graduate study in Geosciences.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core	12
Degree Electives	18
Cognate Sciences	24
Physics	
Chemistry	
Math	
Computer Science	
Cognate Electives	
Total Hours	54

## Lower-Division Core



CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GEO 101N	Introduction to Physical Geology	
GEO 103N	Introduction to Environmental Geology	
GEO 105N	Oceanography	
GEO 107N	Natural Disasters	
<b>Complete one of the following courses:</b>		1
GEO 102N	Introduction to Physical Geology Lab	
GEO 104N	Introduction to Environmental Geology Lab	
<b>Complete all of the following courses:</b>		
GEO 201	Geologic Evolution of North America	4
GEO 202	The Water Planet	4
Total Hours		12

Minimum Required Grade: C-

## Degree Electives

**Note:** At least three of these courses must be at the 400-level.

CODE	TITLE	HOURS
<b>Complete 18 credits of the following courses:</b>		18
GEO 302	Mineralogy and Optical Mineralogy	
GEO 305	Igneous and Metamorphic Petrology	
GEO 309	Sedimentation and Stratigraphy	
GEO 315	Structural Geology	
GEO 318	Earth's Changing Climate	
GEO 320	Global Water	
GEO 327	Geochemistry	
GEO 391	Special Topics	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 433	Global Tectonics	
GEO 439	Geophysics	
GEO 443	Principles of Sedimentary Petrology	
GEO 460	Process Geomorphology	
GEO 488	Snow, Ice, and Climate	
GEO 491	Special Topics	
Total Hours		18

Minimum Required Grade: C-

## Cognate Sciences

**Rule:** In addition to completing course work in Geosciences, a minimum of 24 credits in cognate science classes must be completed. More advanced courses in Chemistry, Computer Science, Math, and Physics may be used to meet the 24 credit minimum total in cognate sciences. Course substitutions for the 24 credit minimum in cognate sciences must be approved by a departmental advisor.

### Physics

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CODE	TITLE	HOURS
<b>Complete one of the following sequences:</b>		5
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	

Minimum Required Grade: C-

**Chemistry**

CODE	TITLE	HOURS
<b>Complete one of the following:</b>		3-5
CHMY 121N	Introduction to General Chemistry	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
Total Hours		3-5

Minimum Required Grade: C-

**Mathematics**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
M 171	Calculus I	4
Total Hours		4

Minimum Required Grade: C-

**Computer Science**

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		3
CSCI 151	Interdisciplinary Computer Science I	
<b>Complete one of the following courses:</b>		
GPHY 284	Introduction to GIS and Cartography	3-4
or STAT 216	Introduction to Statistics	
Total Hours		6-7

Minimum Required Grade: C-

**Cognate Elective**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
COMX 111A	Introduction to Public Speaking	
COMX 242	Argumentation	
ENST 230H	Nature and Society	
ENST 320E	Earth Ethics	
ENST 367	Environmental Politics & Policies	
GPHY 335	Water Policy	
NRSM 427	Advanced Water Policy	
NRSM 475	Environment & Development	
PHL 112E	Intro Ethics and Environment	
PHL 323	Ethics of Climate Change	
Total Hours		6

Minimum Required Grade: C-

## Geosciences B.S. - Earth Science Education Concentration

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Science - Geosciences; Earth Science Education Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 66

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education and Human Sciences for more information. A major GPA of 2.75 is required to be eligible for student teaching. This major does not qualify as a single field endorsement. Individuals must complete the teaching track of a second major or minor in another content area.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core Courses	11
Geosciences Core	
Environmental Geoscience Course	
Upper-Division Geoscience Courses	21
Upper-Division Geoscience Core Courses	
Upper-Division Geoscience Elective Course	
Physics	10
Chemistry	9
Math	8
Astronomy	3
Teaching Methods Course	4
Total Hours	66

### Lower-Division Core

#### Geosciences Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 201	Geologic Evolution of North America	4
Total Hours		8

Minimum Required Grade: C-

#### Environmental Geoscience Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GEO 105N	Oceanography	3
Total Hours		3

Minimum Required Grade: C-

## Upper-Division Geoscience Courses

### Upper-Division Geoscience Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 302	Mineralogy and Optical Mineralogy	4
GEO 304E	Science and Society	3
GEO 311	Paleobiology	3
GEO 315	Structural Geology	4
GEO 318	Earth's Changing Climate	4
Total Hours		18

Minimum Required Grade: C-

### Elective Upper-Division Geoscience Course

**Note:** GEO 320 is recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.

CODE	TITLE	HOURS
<b>Complete one additional GEO course at the 300- or 400-level.</b>		3

Minimum Required Grade: C-

## Physics

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Chemistry

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry	4
CHMY 485	Laboratory Safety	1
Total Hours		5

Minimum Required Grade: C-

## Mathematics



CODE	TITLE	HOURS
<b>Complete one math and one statistics course:</b>		
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 171	Calculus I	
<b>Complete the following courses:</b>		
STAT 216	Introduction to Statistics	4
Total Hours		8

Minimum Required Grade: C-

## Astronomy

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ASTR 131N	Planetary Astronomy	3
Total Hours		3

Minimum Required Grade: C-

## Teaching Methods Course

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Secondary Teaching Licensure

## University Of Montana

**Note:** For endorsement to teach earth science, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Geosciences Minor

## Minor - Geosciences

College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Courses	8
Minor Electives	10
Total Hours	18

### Lower-Division Core Courses

**Rule:** Must complete all of the courses in one of two options. Completion of either option fulfills the Lower Division Core requirement. Completion of all the courses in one option is recommended, but alternative sequences may be approved by a Geosciences advisor.

#### Option 1

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 201	Geologic Evolution of North America	4
Total Hours		8

Minimum Required Grade: C-

#### Option 2

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 103N	Introduction to Environmental Geology	3
GEO 104N	Introduction to Environmental Geology Laboratory	1
GEO 201	Geologic Evolution of North America	4
Total Hours		8

Minimum Required Grade: C-

### Minor Electives

CODE	TITLE	HOURS
<b>Complete an additional 10 credits in Geosciences courses numbered 200 and above.</b>		10
Total Hours		10

Minimum Required Grade: C-

# International Field Geosciences Dual

## Bachelor of Science - International Field Geosciences Dual

College of Humanities & Sciences

**Degree Specific Credits:** 100-107

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** This degree is designed specifically for students who seek to combine a rigorous education in the Geosciences with a yearlong international Geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. For students who satisfy all degree requirements, a B.S. degree in International Field Geosciences will be awarded by The University of Montana and a second B.S. degree in International Field Geosciences will be awarded by the University of Potsdam. The degree requirements specified below pertain both to UM-based and Potsdam-based students seeking their UM diploma. Potsdam-based students are eligible to satisfy any of the following specific requirements through credits that are transferred from the University of Potsdam and approved as equivalent by the UM Geosciences undergraduate advisors.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core	8
Upper-Division Core	12
Degree Electives	17
Physics	10
Chemistry	8-10
Math	7-8
Computer Science	3-4
Language Requirement	8
Overseas Coursework	27-30
Total Hours	100-107

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 201	Geologic Evolution of North America	4
Total Hours		8

Minimum Required Grade: C-

### Upper-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 302	Mineralogy and Optical Mineralogy	4
GEO 315	Structural Geology	4
GEO 318	Earth's Changing Climate	4
Total Hours		12

Minimum Required Grade: C-

### Degree Electives

CODE	TITLE	HOURS
<b>Complete 17 credits of the following courses:</b>		17
GEO 305	Igneous & Metamorph Petrology	
GEO 309	Sedimentation/Stratigraphy	
GEO 311	Paleobiology	
GEO 320	Global Water	
GEO 327	Geochemistry	
GEO 420	Hydrogeology	
GEO 433	Global Tectonics	
GEO 460	Process Geomorphology	
GEO 491	Special Topics	
Total Hours		17

Minimum Required Grade: C-

### Physics

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Chemistry

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4-5
CHMY 121N	Introduction to General Chemistry	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
Total Hours		4-5

Minimum Required Grade: C-

## Math



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

### Computer Science

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
GPHY 284	Intro to GIS and Cartography	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

### Language Requirement

**Rule:** UM outgoing students must complete the following language sequence (the "test out provision" applies as administered by the Department of Modern and Classical Languages and Literatures).

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRMN 101	Elementary German I	4
GRMN 102	Elementary German II	4
Total Hours		8

Minimum Required Grade: C-

### Overseas Coursework

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following courses and field work at the University of Potsdam:</b>		27-30
<b>Complete one of the following field courses run by the University of Potsdam:</b>		
	BP 15 (Field Course - France)	
	BW01 (Field Course - Norway)	
	BW02 (field Course - Alps)	
<b>Complete 4 of the following courses offered by the University of Potsdam:</b>		
	Regional Geology	
	Paleoclimate @ Quaternary Geology	
	Analysis of Geologic Maps	
	Analytic Geochemistry	
	Natural Hazards	
	Tectonophysics & Rheology	
	Seismology	
	Seismics	
	Goelectrics	
	Sedimentary Systems & Stratigraphic Geomorphology	
	Tectonics and Geodynamics	
<b>Complete 2 additional cognate science courses at the University of Potsdam</b>		
	Total Hours	27-30

Minimum Required Grade: C-

# International Field Geosciences Joint

## Bachelor of Science - International Field Geosciences Joint

College of Humanities & Sciences

**Degree Specific Credits:** 108-115

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** This degree is designed specifically for students who seek to combine a rigorous education in the Geosciences with a yearlong international Geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. Most of the course work completed during the year abroad will take place at University College Cork (UCC) in Ireland. For students who satisfy all degree requirements, a joint B.S. degree in International Field Geosciences will be awarded by The University of Montana and the University College Cork.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Core	8
Upper-Division Core	16
Degree Electives	15
Physics	10
Chemistry	8-10
Math	7-8
Computer Science	3-4
Language Requirement	8
German	
Irish	
Overseas Coursework	33-36
Total Hours	108-115

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 201	Geologic Evolution of North America	4
Total Hours		8

Minimum Required Grade: C-

### Upper-Division Core

**Rule:** Complete all of the following subcategories. 12 total credits required.

#### Subcategory 1

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 302	Mineralogy and Optical Mineralogy	4
GEO 315	Structural Geology	4
GEO 318	Earth's Changing Climate	4
Total Hours		12

Minimum Required Grade: C-

### Subcategory 2

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
GEO 309	Sedimentation/Stratigraphy	
GEO 443	Principles of Sedimentary Petrology	
Total Hours		4

Minimum Required Grade: C-

### Degree Electives

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 15 credits of the following courses:</b>		15
GEO 305	Igneous & Metamorph Petrology	
GEO 309	Sedimentation/Stratigraphy	
GEO 311	Paleobiology	
GEO 320	Global Water	
GEO 327	Geochemistry	
GEO 420	Hydrogeology	
GEO 433	Global Tectonics	
GEO 443	Principles of Sedimentary Petrology	
GEO 460	Process Geomorphology	
GEO 491	Special Topics	
Total Hours		15

Minimum Required Grade: C-

## Physics

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Chemistry

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4-5
CHMY 121N	Introduction to General Chemistry	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
Total Hours		4-5

Minimum Required Grade: C-

## Math

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

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### Computer Science

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
GPHY 284	Intro to GIS and Cartography	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

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### Language Requirement

**Note:** The "test out provision" applies as administered by the Department of Modern and Classical Languages and Literature.



## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following language sequences:</b>		8
<b>German</b>		
GRMN 101	Elementary German I	
GRMN 102	Elementary German II	
<b>Irish</b>		
IRSH 101	Elementary Irish	
IRSH 102	Elementary Irish II	
Total Hours		8

Minimum Required Grade: C-

## Overseas Coursework

CODE	TITLE	HOURS
<b>In addition to Geosciences coursework completed at UM, complete the following courses and field work at University College of Cork and the University of Potsdam:</b>		33-36
<b>Complete 1 of the following formal field course modules run by University College Cork:</b>		
GL 2016 (Easter Field Course - Dingle Peninsula)		
GL 3019 (Easter Field Course - Western Scotland)		
ER 3002 (Easter Field Course - North Clare)		
GL 4008 (Easter Field Course - Central Greece)		
Another equivalent-level field course run by UCC and approved apriori by their UCC and UM advisors		
<b>While in residence at Cork, complete any 9 of the following courses in consultation with UCC and UM advisors:</b>		
Sed Processes and Petrology		
Igneous and MM Petrology		

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Invertebrate Paleontology & Evolution	
Plate Tectonics & Global Geophysics	
Igneous Petrogenesis & Geochemistry	
Metamorphism & Geochronology	
Advanced Structural Geology	
Sedimentary Environments	
Stratigraphy & Geologic Maps	
Environmental Geology	
Terr Ecosystems Through Time	
Micropaleontology & Palynology	
Petroleum Geology & Basin Analysis	
Applied Geophysics & Computer Applications	
Advanced Igneous Petrology	
Hydrogeology	
<b>Complete 1 formal upper-level Geosciences course at the University of Potsdam. Recommended are courses that focus on computer-based visualization or geoscience data using GIS or other visualization platforms.</b>	
Total Hours	33-36

Minimum Required Grade: C-

# History Department

## Kyle Volk, Chair

The History Department offers an exciting program of instruction for undergraduates in search of an education. The curriculum is designed to provide knowledge and understanding of the background and ramifications of present local, national, and world affairs. The program emphasizes historical analysis and critical thought rather than the memorization of facts. History majors are taught how to read critically, analyze thoughtfully, conduct research carefully, and write intelligently.

The department offers a wide variety of courses ranging in time, space, and theme. Courses span the full range of American history from the colonial period through the recent past. More specialized courses in local and regional history focus on Montana, the West, and the northern Rockies. Offerings in European and world history emphasize social, cultural, and intellectual history, French and German history, British history, Russian and Soviet history, Latin American history, Islamic civilization, East Asian history, and Central and Southwest Asian history. Topical courses explore issues of democracy, diplomacy, human rights, war and peace, terrorism, race and gender, religion, and environmental history.

History provides not only a basis for future employment but also, more importantly, furnishes knowledge and perspective for intelligent leadership in community affairs. Graduates are employed in federal, state, or local governments, with positions ranging from elected office to research analysts. Many teach history in middle schools and high schools while others pursue advanced degrees at the graduate level. Still others go on to attain professional degrees in law, journalism, and business.

The History Department at the University of Montana boasts professors with award-winning scholarship and active research agendas, which greatly enhances the education and training we provide to our students.

The Department offers the

- Bachelor of Arts,
- Bachelor of Arts for teaching,
- Master of Arts, and
- the Doctor of Philosophy degrees.

Our graduate students have found great success in a diverse range of occupations in public history, in education, and in academia.

## Baccalaureate Degrees

- History B.A.
- History B.A., History Education Concentration
- History-Political Science B.A.

## Undergraduate Minor

# University Of Montana

- History

# History B.A.

## Bachelor of Arts - History

### College of Humanities & Sciences

**Degree Specific Credits:** 40

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Notes:**

- A minimum of 40 credits in History are required, 21 of which must be upper-division credits. A maximum of 60 credits in History are allowed. Penalties will apply for more than 60 credits.
- Credits from Advanced Placement and International Baccalaureate do not count toward these credit requirements.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	9
Methods	
Introductory History	
American History Electives	6
World History Electives	6
European History Electives	6
Advanced Writing Courses in History	3
Additional History Courses	10
Total Hours	40

### Lower-Division Core Courses

# University Of Montana

**Rule:** Complete the following subcategories. 9 total credits required.

## Methods

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HSTR 200	Intro: Historical Methods	1
Total Hours		1

Minimum Required Grade: C-

## Introductory History

**Note:** Must select either the regular or honors version of a course to apply to the requirement.

**AP/IB Policy:** Those students scoring a "5" on either the American History or European History AP exam are excused from this requirement. These students earn credit toward the requirement and graduation, but do not earn credit toward the history degree.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		8
HSTA 101H	American History I	
or HSTA 103H	Honors American History I	
HSTA 102H	American History II	
or HSTA 104H	Honors American History II	
HSTR 101H	Western Civilization I	
or HSTR 103H	Honors Western Civilization I	
HSTR 102H	Western Civilization II	
or HSTR 104H	Honors Western Civilization II	
Total Hours		8

Minimum Required Grade: C-

## American History Electives

**Note:** Courses with historical content offered in other departments at UM may count toward the History degree with consent of the History Department chair.

University Of Montana

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
AAST 141H	Black: From Africa to Hip-Hop	
HSTA 101H	American History I	
HSTA 102H	American History II	
HSTA 103H	Honors American History I	
HSTA 104H	Honors American History II	
HSTA 191	Special Topics	
HSTA 255	Montana History	
HSTA 262	Abolitionism	
HSTA 275	Making History Public	
HSTA 291	Special Topics	
HSTA 307Y	The American Revolution and Founding Era	
HSTA 315	Early American Republic	
HSTA 316	American Civil War Era	
HSTA 320	Birth of Modern US	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
HSTA 323	U.S. in the 1950s	
HSTA 324	U.S. in the 1960s	
HSTA 333	American Military History	
HSTA 335	Movie America	
HSTA 342H	Afr Amer Hist to 1865	
HSTA 343H	Afr Amer Hist Since 1865	

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HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 344	African-American Struggle for Equality	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	
HSTA 373	American Thought to 1865	
HSTA 377	Alcohol in American History	
HSTA 380	American Constitutional History	
HSTA 382H	History of American Law	
HSTA 385	Families & Children in America	
HSTA 391	Special Topics	
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 461	Research in Montana History	
HSTA 471	Writing Women's Lives	
HSTA 491	Special topics	
HSTA 494	Seminar	
HSTR 300	Writing For History	
HSTR 364	Environmental History	
HSTR 369	20th Cent Amer West	
HSTR 400	Historical Research Seminar	
Total Hours		6

Minimum Required Grade: C-

**World History Electives**



# University Of Montana

**Note:** Courses with historical content offered in other departments at UM may count toward the History degree with consent of the History Department chair.

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		<b>6</b>
HSTR 191	Special Topics	
HSTR 221H	God - Past, Puzzle, Present	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240H	East Asian Civilizations	
HSTR 262	Islamic Civil: Classical Age	
HSTR 264	Islamic Civ: Modrn Era	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 291	Special Topics	
HSTR 291H	Special Topics	
HSTR 300	Writing For History	
HSTR 334	Latin America: Reform & Revolution	
HSTR 335	Latin America: Workers & Labor	
HSTR 345H	Modern China	
HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 400	Historical Research Seminar	
HSTR 435	Lat Am Human Rgts & Memory	
HSTR 437	US-Latin America Relations	

University Of Montana

HSTR 491	Special Topics	
HSTR 492	Independent Study	
Total Hours		6

Minimum Required Grade: C

**European History Electives**

**Note:** Courses with historical content offered in other departments at UM may count toward the History degree with consent of the History Department chair.

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
HSTR 101H	Western Civilization I	
HSTR 102H	Western Civilization II	
HSTR 103H	Honors Western Civilization I	
HSTR 104H	Honors Western Civilization II	
HSTR 300	Writing For History	
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
HSTR 304H	Ancient Rome	
HSTR 312	Age of Absolut 1648-1789	
HSTR 315	Reformation	
HSTR 320	European Social and Intellectual History: 1450-1789	
HSTR 323	European Social and Intellectual History: The 19th Century	
HSTR 325	European Social and Intellectual History: The 20th Century	
HSTR 326	Contemporary Europe	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	

HSTR 350	Modern Britain	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 400	Historical Research Seminar	
HSTR 401	The Great Historians	
HSTR 418	Britain 1500 - 1800	
HSTR 491	Special Topics	
HSTR 492	Independent Study	
Total Hours		6

Minimum Required Grade: C-

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**Advanced Writing Courses in History**

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 427	Freedom, Slavery, Equality: Early American Perspectives	
HSTA 461	Research in Montana History	
HSTA 471	Writing Women's Lives	
HSTR 400	Historical Research Seminar	
HSTR 418	Britain 1500 - 1800	
HSTR 437	US-Latin America Relations	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## History B.A. - History Education

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, students will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - History; History Education Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 46

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Notes:

- A maximum of 60 credits in History are allowed. Penalties will apply for more than 60 credits.
- Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education and Human Sciences for more information.
- Students who choose to complete the concentration in History Education must also complete the teaching track/concentration in a major or minor in a second field.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	12
American History Introductory Course	
European History Introductory Course	
Montana History	
Historical Methods Course	
American History Upper-Division Electives	6
World History Electives	9
European Upper-Division History Electives	6
Upper-Division History Electives	6
Teaching Methods Requirement	4
Advanced Writing in History Requirement	3
Total Hours	46

## Lower-Division Core Courses

**Rule:** Complete the following subcategories. 12 total credits required.

**Note:** AP Policy: Those students scoring a "5" on the European History AP exam can be excused from the survey course requirement. Another European history course must then be taken in place of the survey course. Please consult with the Humanities Advisor with questions.

### American History Introductory Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
HSTA 101H	American History I	
or HSTA 103H	Honors American History I	
HSTA 102H	American History II	
or HSTA 104H	Honors American History II	
Total Hours		4

# University Of Montana

Minimum Required Grade: C-

## European History Introductory Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
HSTR 101H	Western Civilization I	
or HSTR 103H	Honors Western Civilization I	
HSTR 102H	Western Civilization II	
or HSTR 104H	Honors Western Civilization II	
Total Hours		4

Minimum Required Grade: C-

## Montana History

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HSTA 255	Montana History	3
Total Hours		3

Minimum Required Grade: C-

## Historical Methods Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HSTR 200	Intro: Historical Methods	1
Total Hours		1

Minimum Required Grade: C-

## American History Upper-Division Electives

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6

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HSTA 307Y	The American Revolution and Founding Era	
HSTA 315	Early American Republic	
HSTA 316	American Civil War Era	
HSTA 320	Birth of Modern US	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
HSTA 323	U.S. in the 1950s	
HSTA 324	U.S. in the 1960s	
HSTA 333	American Military History	
HSTA 335	Movie America	
HSTA 342H	Afr Amer Hist to 1865	
HSTA 343H	Afr Amer Hist Since 1865	
HSTA 344	African-American Struggle for Equality	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	
HSTA 373	American Thought to 1865	
HSTA 377	Alcohol in American History	
HSTA 380	American Constitutional History	
HSTA 382H	History of American Law	
HSTA 385	Families & Children in America	
HSTA 391	Special Topics	
HSTA 491	Special topics	



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HSTA 494	Seminar	
HSTR 364	Environmental History	
HSTR 369	20th Cent Amer West	
Total Hours		6

Minimum Required Grade: C-

## World History Electives

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
HSTR 191	Special Topics	
HSTR 221H	God - Past, Puzzle, Present	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240H	East Asian Civilizations	
HSTR 241H	Central Asian Cult & Civ	
HSTR 262	Islamic Civil: Classical Age	
HSTR 264	Islamic Civ: Modrn Era	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 291	Special Topics	
HSTR 291H	Special Topics	
HSTR 300	Writing For History	
HSTR 334	Latin America: Reform & Revolution	
HSTR 335	Latin America: Workers & Labor	
HSTR 345H	Modern China	

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HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 435	Lat Am Human Rgts & Memory	
HSTR 437	US-Latin America Relations	
HSTR 491	Special Topics	
HSTR 492	Independent Study	
Total Hours		9

Minimum Required Grade: C-

## European Upper-Division History Electives

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
HSTR 300	Writing For History	
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
HSTR 304H	Ancient Rome	
HSTR 312	Age of Absolut 1648-1789	
HSTR 315	Reformation	
HSTR 320	European Social and Intellectual History: 1450-1789	
HSTR 325	European Social and Intellectual History: The 20th Century	
HSTR 323	European Social and Intellectual History: The 19th Century	
HSTR 348	Britain 1485-1688	

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HSTR 349	Britain from Rev - Reform 1688	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
HSTR 391	Special Topics	
HSTR 401	The Great Historians	
HSTR 491	Special Topics	
Total Hours		6

Minimum Required Grade: C-

## Upper-Division History Electives

CODE	TITLE	HOURS
<b>Complete two additional HSTA or HSTR courses at the 300-level and above.</b>		6
Total Hours		6

Minimum Required Grade: C-

## Teaching Methods Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Advanced Writing in History Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 461	Research in Montana History	
HSTA 471	Writing Women's Lives	
HSTR 400	Historical Research Seminar	
HSTR 418	Britain 1500 - 1800	
HSTR 437	US-Latin America Relations	
Total Hours		3

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach history, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## History-Political Science B.A.

This major is intended solely for students who want to be licensed to teach history, government, and one additional social science at the middle and high school levels.

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, students will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - History-Political Science

### College of Humanities & Sciences

**Degree Specific Credits:** 71

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Notes:

- This major is intended solely for students who want to be licensed to teach history, government, and one additional social science at the middle and high school levels.
- Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students are eligible for a teaching license in social studies broadfield. See the Department of Teaching and Learning for more information.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

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Lower-Division Core History Requirements	
American History Introductory Courses	
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Political Science Requirements	30
Lower-Division Core Political Science Requirements	
American Government/Public Law Electives	
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Additional Social Science Field Electives	9
Economics	
Geography	
Psychology	
Sociology	
Education Methods	4
Secondary Teaching Licensure	
Total Hours	71

### History Requirements

**Rule:** Complete the following subcategories. 32 total credits required.

#### Lower-Division Core History Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HSTA 255	Montana History	3
HSTR 200	Intro: Historical Methods	1
Total Hours		4

Minimum Required Grade: C-

**American History Introductory Courses**

**Note:** Student must select either the regular or honors version of a course to apply to the requirement.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		8
HSTA 101H	American History I	
or HSTA 103H	Honors American History I	
HSTA 102H	American History II	
or HSTA 104H	Honors American History II	
Total Hours		8

Minimum Required Grade: C-

**Western History Introductory Courses**

**Note:** Student must select either the regular or honors version of a course to apply to the requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
HSTR 101H	Western Civilization I	
or HSTR 103H	Honors Western Civilization I	
HSTR 102H	Western Civilization II	
or HSTR 104H	Honors Western Civilization II	
Total Hours		4

Minimum Required Grade: C-

**American History Elective**

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
HSTA 307Y	The American Revolution and Founding Era	
HSTA 315	Early American Republic	
HSTA 316	American Civil War Era	
HSTA 320	Birth of Modern US	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
HSTA 323	U.S. in the 1950s	
HSTA 324	U.S. in the 1960s	
HSTA 333	American Military History	
HSTA 335	Movie America	
HSTA 342H	Afr Amer Hist to 1865	
HSTA 343H	Afr Amer Hist Since 1865	
HSTA 344	African-American Struggle for Equality	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	
HSTA 373	American Thought to 1865	
HSTA 377	Alcohol in American History	
HSTA 380	American Constitutional History	
HSTA 382H	History of American Law	



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HSTA 385	Families & Children in America	
HSTA 391	Special Topics	
HSTA 491	Special topics	
HSTA 494	Seminar	
HSTR 364	Environmental History	
HSTR 369	20th Cent Amer West	
Total Hours		3

Minimum Required Grade: C-

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**World History Elective**

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CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
ANTY 141H	The Silk Road	
HSTR 191	Special Topics	
HSTR 221H	God - Past, Puzzle, Present	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240H	East Asian Civilizations	
HSTR 241H	Central Asian Cult & Civ	
HSTR 262	Islamic Civil: Classical Age	
HSTR 264	Islamic Civ: Modrn Era	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 291	Special Topics	
HSTR 300	Writing For History	
HSTR 334	Latin America: Reform & Revolution	
HSTR 335	Latin America: Workers & Labor	
HSTR 345H	Modern China	
HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
HSTR 391	Special Topics	
HSTR 491	Special Topics	
HSTR 435	Lat Am Human Rgts & Memory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**European History Elective**

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CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
HSTR 300	Writing For History	
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
HSTR 304H	Ancient Rome	
HSTR 312	Age of Absolut 1648-1789	
HSTR 315	Reformation	
HSTR 320	European Social and Intellectual History: 1450-1789	
HSTR 323	European Social and Intellectual History: The 19th Century	
HSTR 325	European Social and Intellectual History: The 20th Century	
HSTR 326	Contemporary Europe	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
HSTR 391	Special Topics	

## University Of Montana

HSTR 491	Special Topics	
Total Hours		3

Minimum Required Grade: C-

### Advanced Writing in History Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 461	Research in Montana History	
HSTA 471	Writing Women's Lives	
HSTR 400	Historical Research Seminar	
HSTR 418	Britain 1500 - 1800	
HSTR 437	US-Latin America Relations	
Total Hours		3

Minimum Required Grade: C-

### Political Science Requirements

**Rule:** Complete the following subcategories. 30 total credits required.

#### Lower-Division Core Political Science Requirements

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

**American Government/Public Law Electives**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 433	International Law & Org	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 468		
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		9

Minimum Required Grade: C-

**Comparative/International Relations Electives**

CODE	TITLE	HOURS
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<b>Complete 3 credits of the following courses:</b>		9
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 463	Development Administration	
PSCI 481	Origins of Democracy and Authoritarianism	
PSCI 482	Politics of the World Economy	

Total Hours	9
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Minimum Required Grade: C-

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## Additional Social Science Field Electives

**Rule:** Complete 1 of the following subcategories. 9 total credits required.

### **Economics**

**Note:** ECNS 191, ECNS 391, ECNS 392, ECNS 491, and ECNS 492 may apply to this requirement depending on the course content.



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CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
ECNS 101S	Economic Way of Thinking	
ECNS 201S	Principles of Microeconomics	
ECNS 202S	Principles of Macroeconomics	
ECNS 217	Issues in Economic Development	
ECNS 301	Intermediate Micro with Calc	
ECNS 302	Intermediate Macroeconomics	
ECNS 310	Intro Health Economics	
ECNS 312	Labor Economics	
ECNS 313	Money and Banking	
ECNS 320	Public Finance	
ECNS 403	Introduction to Econometrics	
ECNS 405	Game Theory	
ECNS 406	Industrial Organization	
ECNS 431	International Trade	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ECNS 450	Adv. Topics in Economic Dev.	
ECNS 488	Res Meth & Thesis Design	
Total Hours		9

Minimum Required Grade: C-

**Geography**

**Note:** GPHY 391,GPHY 491, and GPHY 492 may apply to this requirement depending on the course content.

CODE	TITLE	HOURS
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University Of Montana

<b>Complete 9 credits of the following courses:</b>		9
GPHY 111N	Intro to Physical Geography	
GPHY 112N	Intro to Phys Geography Lab	
GPHY 121S	Human Geography	
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 245	The Middle East	
GPHY 284	Intro to GIS and Cartography	
GPHY 291	Special Topics	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 335	Water Policy	
GPHY 338	Mountains and Society	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 378	Preceptorship in Geography	
GPHY 385	Field Techniques	
GPHY 421	Sustainable Cities	
GPHY 432	Human Role Environmental Change	
GPHY 433	Community Resilience	

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GPHY 434	Food and Famine	
GPHY 438	Mountain Field Study	
GPHY 444	High Asia	
GPHY 465	Planning Principles & Processes	
GPHY 466	Environmental Planning	
GPHY 468	Community & Regional Analysis	
GPHY 469	Planning & Analysis Laboratory	
GPHY 481	Advanced Cartographic Design	
GPHY 482	Spatial Analysis & GIS	
GPHY 485	Internet GIS	
GPHY 486	Transport, Planning & GIS	
GPHY 487	Remote Sensing/Raster GIS	
GPHY 488	Applications of GIS	
GPHY 489	Cartography/GIS Laboratory	
GPHY 497	Workshop in Teaching Geography	
Total Hours		9

Minimum Required Grade: C-

**Psychology**

**Note:** PSYX 191, PSYX 192, PSYX 290, PSYX 291, PSYX 292, PSYX 390, PSYX 391, PSYX 392, and PSYX 491 may apply to this requirement depending on the course content.

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
PSYX 100S	Intro to Psychology	
PSYX 105	Careers in Psychology	
PSYX 120	Introduction to Psychological Research Methods	

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PSYX 161S	Fund of Organizational Psych	
PSYX 222	Psychological Statistics	
PSYX 230	Developmental Psychology	
PSYX 233	Fund of Psychology of Aging	
PSYX 238	Adolescent Psychology	
PSYX 240	Fund of Abnormal Psychology	
PSYX 250N	Fund of Biological Psychology	
PSYX 270	Fund Psychology of Learning	
PSYX 280	Fund of Memory and Cognition	
PSYX 320	Advanced Psychological Research Methods	
PSYX 340	Abnormal Psychology	
PSYX 345	Child & Adolescent Psych Disorders	
PSYX 348	Psychology of Family Violence	
PSYX 352	Comparative Psychology	
PSYX 356	Human Neuropsychology	
PSYX 360	Social Psychology	
PSYX 362	Multicultural Psychology	
PSYX 376	Principles of Cognitive Behavioral Modification	
PSYX 377	Personalized Student Instr	
PSYX 378	Intro to Clinical Psychology	
PSYX 385	Psychology of Personality	
PSYX 400	History & System in Psychology	
COUN 485	Counseling Theories	
Total Hours		9

Minimum Required Grade: C-

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## Sociology

**Note:** SOCI 191, SOCI 291, SOCI 391, SOCI 491, and SOCI 492 may apply to this requirement depending on the course content.

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
SOCI 101S	Introduction to Sociology	
SOCI 130S	Soc of Alternative Religions	
SOCI 202	Social Statistics	
SOCI 211S	Introduction to Criminology	
SOCI 212S	Social Issues Southeast Asia	
SOCI 220S	Race, Gender & Class	
SOCI 221	Criminal Justice System	
SOCI 260S	Introduction to Juvenile Delinquency	
SOCI 270	Intro Development Sociology	
SOCI 275S	Gender and Society	
SOCI 306	Sociology of Work	
SOCI 312	Criminal Adjudication	
SOCI 318	Sociological Research Methods	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	
SOCI 335	Juvenile Justice System	
SOCI 345	Sociology of Organizations	
SOCI 346	Rural Sociology	
SOCI 350	The Community	
SOCI 355	Population and Society	

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SOCI 362	Sociology of Law Enforcement	
SOCI 382	Soc Psych and Social Structure	
SOCI 386	Preceptorship in Sociology	
SOCI 423	Sociology of Corrections	
SOCI 435	Law and Society	
SOCI 438	Seminar in Crime & Deviance	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 442	ISJ Service Learning	
SOCI 443	Sociology of Poverty	
SOCI 455	Classical Sociological Theory	
SOCI 460	Capstone: Rural and Env Change	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
SOCI 485	Political Sociology	
Total Hours		9

Minimum Required Grade: C-

## Education Methods

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach social studies broadfield, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# History Minor

## Minor - History

### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** A minimum of 18 credits in History are required, of which at least 9 must be upper-division.

## Summary

History Elective Courses	18
Total Hours	18

## History Electives

CODE	TITLE	HOURS
	<b>Complete 18 elective credits in American, European, and/or World History, at least 9 of which must be upper-division.</b>	18
	Total Hours	18

Minimum Required Grade: C-

## Teaching History Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program



## University Of Montana

### ○ Licensure Degree Requirements

- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Methods Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach history, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Public History Certificate

## Post-secondary Certificate - Public History

College of Humanities & Sciences

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Core Courses	6
Electives	6
Total Hours	12

### Core Courses

**Note:** Courses may not count toward both core course and elective requirements.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HSTA 275 or HSTA 374	Making History Public or Doing Local History: Missoula	3
HSTR 398 or HSTR 370	Public History Internship or Oral History	3
Total Hours		6

Minimum Required Grade: C-

### Electives

**Notes:**

- Three credits of electives must be taken within the History department.

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- Substitutions, including independent studies or special offerings in public history, require approval of the Public History Coordinator.

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		<b>6</b>
ARTH 334H	Architectural History II, 1850-Present	
ANTY 398	Internship	
ANTY 403	Public Anthropology	
ANTY 455	Artifact Analysis	
ANTY 456	Historical Archaeology	
ANTY 466	Archaeological Survey	
ANTY 467	Archaeological Field School	
ANTY 495	Field Experience	
HPRV 400	Historic Preservation	
HSTA 275	Making History Public	
HSTA 326	Digital Worlds of Early America	
HSTA 370H	Women in America: From the Colonial Era through the Civil War	
HSTA 371H	Women in America: From the Civil War to the Present	
HSTA 374	Doing Local History: Missoula	
HSTA 377	Alcohol in American History	
HSTR 370	Practicing Oral History	
HSTR 398	Internship	
HSTR 435	Latin America Human Rights & Memory	
JRNL 100H	Journalism & American Society	
JRNL 300	First Amendment and Journalism Law	

Minimum Required Grade: C-

# Linguistics

## **Mizuki Miyashita, Program Director**

Linguistics is the scientific study of language. The BA in linguistics is appropriate for any student who is interested in science or language. Students are introduced to core areas of linguistics (the structure of speech sounds, words, and sentences) as well as a broad range of related topics including language use, development, variation, change, and endangerment. The emphasis throughout is on developing strong data-analysis and critical-reasoning skills. Recommended areas of study in addition to linguistics are World Languages and Cultures, Anthropology, CSD, English, Communication Studies, Sociology, Education, Information Technology, Environmental Science, Political Science, and Psychology.

## Undergraduate

- Linguistics B.A.
- English as a Second Language Certificate

## Undergraduate Minors

- Linguistics Minor

University Of Montana

# Linguistics B.A.

## Bachelor of Arts - Linguistics

College of Humanities & Sciences

**Degree Specific Credits:** 35-37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Required Core Courses	18
Required Seminar	3
Language Requirement	8-10
Linguistics Electives	6
Total Hours	35-37

## Required Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
LING 375X	Linguistic Ecology and Language Endangerment	3
LING 470	Linguistic Analysis	3
LING 471	Phonetics and Phonology	3
LING 472	Syntax	3
LING 489	Morphology	3
Total Hours		18

Minimum Required Grade: C-

### Required Seminar

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LING 494	Seminar	3
Total Hours		3

Minimum Required Grade: C-

### Language Requirement

CODE	TITLE	HOURS
<b>Complete 8-10 credits (two semesters) of language courses beyond the General Education requirement.</b>		8-10

Minimum Required Grade: C-

### Linguistics Electives

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LING 473	Language and Culture	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
LING 477	Bilingualism	
LING 478	Learner Language	
LING 484	NA Indigenous Lang & Ling	
<b>One of the above LING courses may be substituted with one of the following:</b>		
ANTY 476	Methods for Native Languages	
CSD 210	Speech & Language Development	
MCLG 410	Methods Teaching Foreign Language	
SPNS 305	Spanish Phonetics	
SPNS 400	Introduction to Spanish Linguistics	
Total Hours		6

Minimum Required Grade: C-

# English as a Second Language Certificate

## Post-secondary Certificate - English as a Second Language

College of Humanities & Sciences

**Degree Specific Credits:** 22

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-2022

**Note:** This certificate is issued by the University upon the recommendation of the Linguistics Program and the Faculty Senate.

### Summary

Core Courses	16
Required Courses	
Core Options	
Elective Courses	6
Total Hours	22

### Core Courses

**Rule:** Must complete the following subcategories. 16 total credits required.

### Required Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 470	Linguistic Analysis	3
LING 471	Phonetics and Phonology	3
LING 472	Syntax	3
LING 480	Teaching English as a Foreign Language	3
LING 495	ESL Practicum (may be taken on a credit/no credit basis)	1
Total Hours		13

Minimum Required Grade: C-

### Core Options

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
LING 477	Bilingualism	
LING 478	Learner Language	
Total Hours		3

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LING 473	Language and Culture	
LING 477	Bilingualism (if not taken as a core course)	
LING 478	Learner Language (if not taken as a core course)	
LING 489	Morphology	
Total Hours		6

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Minimum Required Grade: C-

# Linguistics Minor

## Minor - Linguistics

### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To earn a Minor in Linguistics, students must complete 18 credits beyond their major degree requirements.

## Summary

Upper-Division Core Courses	9
Core Course	
Additional Core Courses	
Elective Courses	9
Total Hours	18

## Upper-Division Core Courses

**Rule:** Complete the following subcategories of courses. 9 total credits required.

### Core Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LING 470	Linguistic Analysis	3
Total Hours		3

Minimum Required Grade: C-

### Additional Core Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
LING 471	Phonetics and Phonology	
LING 472	Syntax	
LING 489	Morphology	
Total Hours		6

Minimum Required Grade: C-

## Elective Courses

**Note:** Please note: In earning this minor, neither LING 270S nor LING 465 may be taken after LING 470. In addition, only 1 of LING 270S and LING 465 may be counted towards the minor. LING 471, LING 472, and LING 489 may be taken as an elective, if not taken as a required core course.

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
LING 270S	Intro to Linguistics	
or LING 465	Structure & History of English	
LING 375X	Linguistic Ecology and Language Endangerment	
LING 465	Structure & History of English	
LING 471	Phonetics and Phonology (if not taken as a core course)	
LING 472	Syntax (if not taken as a core course)	
LING 473	Language and Culture	
LING 474	Historical Linguistics	
LING 475	Linguistic Field Methods	
LING 477	Bilingualism	
LING 478	Learner Language	
LING 484	NA Indigenous Lang & Ling	
LING 489	Morphology (if not taken as a core course)	
Total Hours		9

Minimum Required Grade: C-

# Mathematical Sciences Department

**Johnathan Bardsley, Chair**

**Nikolaus Vonessen, Associate Chair**

Mathematics is studied both as a tool and for its own sake. Its usefulness for the sciences and in decision-making processes makes it an indispensable part of many curricula. Mathematics is challenging, fascinating, and beautiful; and it is also appreciated by many who seek primarily to use mathematics as a tool.

The Department of Mathematical Sciences provides students with the training in mathematics and statistics necessary for success in their careers. The instructional mission of the department has three components: we offer general education quantitative literacy courses; we provide the mathematical background for students preparing for careers in other fields; and we offer a quality program of mathematical specialization at all levels, ranging from an undergraduate minor to bachelors, masters, and doctoral degrees in a variety of fields, including teacher preparation.

Mathematics more and more becomes an integral part of high-tech industries; many technological, political, and social processes have become so complex that they could not be really understood without a mathematician's involvement. Our graduates are prepared for exciting and fulfilling careers in academia, industry, government, and other areas. In addition to educational activities, our faculty are committed to excellence both in research in the mathematical sciences and in service to the citizens of Montana and the wider community.

**High School Preparation:** For studying mathematics at the University level, it is recommended that the high school course work consist of four years of college-preparatory mathematics, including geometry, trigonometry, and college algebra or precalculus. A course in calculus or statistics is helpful, but not necessary. It is unusual to complete an undergraduate degree in mathematics in four years without the necessary background to take M 171 during the freshman year (preferably during the first semester at the university).

## Baccalaureate Degrees

- Mathematics B.A.
- Mathematics B.A., Applied Mathematics Concentration
- Mathematics B.A., Combinatorics and Optimization Concentration
- Mathematics B.A., Mathematics Education Concentration
- Mathematics B.A., Pure Mathematics Concentration
- Mathematics B.A., Statistics and Data Science Concentration
- Mathematical Sciences-Computer Science B.S.

## Undergraduate Minors

- Mathematics Minor

## Mathematical Sciences-Computer Science B.S. (Combined Major)

The purpose of the combined program is to provide a thorough background in both allied disciplines and to inculcate a deeper understanding of their goals and methods. A student must complete 62 credits in the two disciplines:

- 31 of these credits in Computer Science courses and
- 31 of these credits in Mathematical Sciences courses.

Each student plans a program in consultation with both a Computer Science and a Mathematical Sciences advisor. Students planning to attend graduate school in computer science or the mathematical sciences should consult with their respective advisors.

### Bachelor of Science - Mathematical Science-Computer Science

#### College of Humanities & Sciences

**Degree Specific Credits:** 74-75

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

#### Summary

## University Of Montana

Mathematical Sciences	31
Computer Science	31
Science Requirement	9-10
Biology	
Chemistry	
Physics	
Public Speaking Requirement	3
Total Hours	74-75

### Mathematical Sciences

**Rule:** Complete the following subcategories. 31 total credits required.

#### Mathematical Sciences Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 307	Introduction to Abstract Mathematics	3
or M 225	Introduction to Discrete Mathematics	
Total Hours		19

Minimum Required Grade: C-

#### Mathematical Sciences Electives



## University Of Montana

**Note:** The combined 9 credits of Computer Science Electives and twelve credits of Mathematical Sciences Electives must include at least three 3 or 4 credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 and STAT 451, STAT 452).

CODE	TITLE	HOURS
<b>Complete 12 credits of the following courses:</b>		12
M 274	Introduction to Differential Equations	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	

## University Of Montana

STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 451	Statistical Methods I	
STAT 452	Statistical Methods II	
Total Hours		12

Minimum Required Grade: C-

## Computer Science

**Rule:** Complete the following subcategories. 31 total credits required.

### Computer Science Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSCI 106	Careers in Computer Science	1
CSCI 150	Introduction to Computer Science	3
CSCI 151	Interdisciplinary Computer Science I	3
CSCI 152	Interdisciplinary Computer Science II	3
CSCI 222	Web Applications Development I	3
CSCI 232	Intermediate Data Structures and Algorithms	3
CSCI 332	Advanced Data Structures and Algorithms	3
CSCI 340	Database Design	3
Total Hours		22

Minimum Required Grade: C-

### Computer Science Electives

**Rule:** In addition to the 22 credits in the Computer Science core, students must take an additional 9 upper division (three hundred level or higher) Computer Science credits.

#### Note:

1. A total of at most three of the 9 credits of Computer Science Electives may be in CSCI 398 or CSCI 498.

## University Of Montana

2. The combined 9 credits of Computer Science Electives and twelve credits of Mathematical Sciences Electives must include at least three 3 or 4 credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 and STAT 451, STAT 452).

CODE	TITLE	HOURS
<b>Complete 9 credits of upper-division (300-level or higher) CSCI courses.</b>		9
Total Hours		9

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete the course work from 1 of the following subcategories. 9-10 total credits required.

### Biology

CODE	TITLE	HOURS
<b>If you choose biology, complete all of the following course s:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
Total Hours		9

Minimum Required Grade: C-

### Chemistry

CODE	TITLE	HOURS
<b>If you choose chemistry, complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

## University Of Montana

Minimum Required Grade: C-

### Physics

CODE	TITLE	HOURS
<b>If you choose physics, complete all of the following courses:</b>		
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

### Public Speaking Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
or COMX 242	Argumentation	
Total Hours		3

Minimum Required Grade: C-

### Suggested Curricula

**Note:** Students are encouraged to choose their Computer Science and Mathematical Sciences Electives according to one of the following curricula; these tracks are suggestions only and, as such, optional. Note that the suggested curricula do not include an advanced College Writing Course.

#### Applied Math Scientific Programming

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 274	Introduction to Ordinary Differential Equations	3
M 412	Partial Differential Equations	3
M 414	Deterministic Models	3
<b>Select one of the following:</b>		3-4
M 381	Advanced Calculus I	
M 440	Numerical Analysis	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
STAT 341	Introduction to Probability and Statistics	
<b>Select three of the following:</b>		9
CSCI 441	Computer Graphics Programming	
CSCI 444	Data Visualization	
CSCI 460	Operating Systems	
CSCI 477	Simulation	
Total Hours		21-22

**Combinatorics and Optimization Artificial Intelligence**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 361	Discrete Optimization	3
M 362	Linear Optimization	3
<b>Select two of the following:</b>		<b>6</b>
M 325	Discrete Mathematics	
M 414	Deterministic Models	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
CSCI 446	Artificial Intelligence	3
CSCI 447	Machine Learning	3
CSCI 460	Operating Systems	3
Total Hours		21

**Data Science (Big Data Analytics)**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 461	Data Science Analytics	3
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	3
STAT 341	Introduction to Probability and Statistics	3
STAT 451	Statistical Methods I	3
STAT 452	Statistical Methods II	3
<b>Select three of the following:</b>		9
CSCI 444	Data Visualization	
CSCI 447	Machine Learning	
CSCI 448	Pattern Recognition	
CSCI 464	Applications of Mining Big Data	
CSCI 480	Applied Parallel Computing Techniques	
Total Hours		24

**Statistics Machine Learning**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
STAT 341	Introduction to Probability and Statistics	3
STAT 421	Probability Theory	3
<b>Select two of the following:</b>		6
M 325	Discrete Mathematics	
M 362	Linear Optimization	
M 485	Graph Theory	
STAT 422	Mathematical Statistics	
<b>Select three of the following:</b>		9
CSCI 340	Database Design	
CSCI 444	Data Visualization	
CSCI 446	Artificial Intelligence	
CSCI 447	Machine Learning	
CSCI 451	Computational Biology	
Total Hours		21

## Algebra Analysis



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
M 381	Advanced Calculus I	3
M 431	Abstract Algebra I	4
<b>Select two of the following:</b>		7-8
M 326	Number Theory	
M 432	Abstract Algebra II	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
CSCI 426	Software Design and Development I	3
CSCI 460	Operating Systems	3
CSCI Elective		3
Total Hours		23-24

## Mathematics B.A.

This degree is the BA in Mathematics without a concentration. Students can add one or more of the concentrations in Applied Mathematics, Combinatorics & Optimization, Pure Mathematics, or Statistics and Data Science to this degree by fulfilling the respective Concentration Requirements (achieved by taking specific Upper-Division Elective Courses). Typically, students declare one of these four concentrations during their sophomore or junior year. Note that the requirements for the Mathematics Education concentration are extensive and differ substantially from the requirements for the other concentrations. Students interested in Mathematics Education are encouraged to declare this concentration as early as possible, preferably during their first year at UM.

## Bachelor of Arts - Mathematics

### College of Humanities & Sciences

**Degree Specific Credits:** 67

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note on degree specific credits:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject):

- 41 credits for students completing a second major, and
- 46 credits for students completing a minor.

**Note on the GPA requirement:**

1. A cumulative GPA of 2.0 is required for all courses used to fulfill major requirements.
2. In addition, a cumulative GPA of 2.0 is required for all mathematical sciences courses used to fulfill major requirements. (Mathematical sciences courses are those with a prefix of M or STAT.)

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Mathematics Core Courses	23
Mathematics Electives	23
Elective Courses	
Science Requirement	18
Foreign Language/Computer Science Requirement	3
Total Hours	67

### Mathematics Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
Total Hours		23

Minimum Required Grade: C-

### Mathematics Electives

**Rule:** Complete 23 credits in this category.

**Note:**

## University Of Montana

1. Students completing a minor (in another subject) need take only 20 credits.
2. Students completing a second major need take only 18 credits.

Minimum Required Grade: C-

### Elective Courses

#### Note:

1. Students completing a minor in another subject or a second major need take only 6 courses.
2. Residency Requirement: At least 4 of the courses in this category must be taken at UM-Missoula (only 3 if M 307 is taken at UM-Missoula).
3. Note that STAT 451 does not count toward this requirement.
4. In addition to counting towards this requirement, M 429 (History of Mathematics) is also an advanced college writing course. Most Mathematics majors use M 429 to meet the advanced college writing general education requirement.

CODE	TITLE	HOURS
<b>Complete 7 courses from the following list; at least 3 of them must be at the 400 level</b>		
M 274	Introduction to Differential Equations	
M 301	Teaching Mathematics with Technology	
M 311	Ordinary Differential Equations and Systems	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	

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M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	

Minimum Required Grade: C-

**Elective Computer Labs and Independent Study Courses**

**Rule:** Computer labs and independent study courses from the following list are optional; if taken (0-2 credits), they count toward the total number of credits required for the Mathematics Elective requirement.

CODE	TITLE	HOURS
M 275	Differential Equations Computer Lab	1
M 363	Linear Optimization Laboratory	1
M 392	Independent Study	variable
M 418	Partial Differential Equations Computer Lab	1
M 492	Independent Study	variable
STAT 392	Independent Study	variable
STAT 457	Computer Data Analysis I	1
STAT 458	Computer Data Analysis II	1
STAT 492	Independent Study	variable

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete 18 credits in at most 3 areas selected from astronomy (ASTR), biology (BIO\*), chemistry (CHMY), computer science (CSCI, except CSCI TR\*), economics (ECNS), forestry (FORS, WILD), geosciences (GEO), management information systems (BMIS), and physics (PHSX).

**Note:**

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

## Language/Computer Science Requirement

**Rule:** Either complete the General Education Requirement Group III: Modern and Classical Language or take one course from the following list.

**Note:** Students completing a second major are exempt from this requirement.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		<b>3</b>
CSCI 126	Computation in the Sciences with Calculus	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Mathematics B.A. - Applied Mathematics

This degree concentration differs from the BA in Mathematics without a concentration only in the Concentration Requirements.

### Bachelor of Arts - Mathematics; Applied Mathematics Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 67

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note on degree specific credits:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject):

- 42 credits for students completing a second major, and
- 46 credits for students completing a minor.

**Note on the GPA requirement:**

1. A cumulative GPA of 2.0 is required for all courses used to fulfill major requirements.
2. In addition, a cumulative GPA of 2.0 is required for all mathematical sciences courses used to fulfill major requirements. (Mathematical sciences courses are those with a prefix of M or STAT.)

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary



## University Of Montana

Mathematics Core Courses	23
Mathematics Electives	23
Elective Courses	
Science Requirement	18
Foreign Language/Computer Science Requirement	3
Requirements for the Applied Mathematics Concentration (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
<b>Total Hours</b>	<b>67</b>

### Mathematics Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses.</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
<b>Total Hours</b>		<b>23</b>

Minimum Required Grade: C-

### Mathematics Electives

# University Of Montana

**Rule:** Complete 23 credits in this category.

**Note:**

1. Students completing a minor (in another subject) need take only 20 credits.
2. Students completing a second major need take only 18 credits.

**Elective Courses**

**Note:**

1. Students completing a minor in another subject or a second major need take only 6 courses.
2. Residency Requirement: At least 4 of the courses in this category must be taken at UM-Missoula (only 3 if M 307 is taken at UM-Missoula).
3. Note that STAT 451 does not count toward this requirement.
4. In addition to counting towards this requirement, M 429 (History of Mathematics) is also an advanced college writing course. Most Mathematics majors use M 429 to meet the advanced college writing general education requirement.

CODE	TITLE	HOURS
<b>Complete 7 courses from the following list; at least 3 of them must be at the 400 level:</b>		
M 274	Introduction to Differential Equations	
M 301	Teaching Mathematics with Technology	
M 311	Ordinary Differential Equations and Systems	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	
M 431	Abstract Algebra I	

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M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	

Minimum Required Grade: C-

**Elective Computer Labs and Independent Study Courses**

**Rule:** Computer labs and independent study courses from the following list are optional; if taken (0-2 credits), they count toward the total number of credits required for the Mathematics Elective requirement.

CODE	TITLE	HOURS
M 275	Differential Equations Computer Lab	1
M 363	Linear Optimization Laboratory	1
M 392	Independent Study	variable
M 418	Partial Differential Equations Computer Lab	1
M 492	Independent Study	variable
STAT 392	Independent Study	variable
STAT 457	Computer Data Analysis I	1
STAT 458	Computer Data Analysis II	1
STAT 492	Independent Study	variable

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete 18 credits in at most 3 areas selected from Astronomy (ASTR), Biology (BIO\*), Chemistry (CHMY), Computer Science (CSCI, except CSCI transfer work), Economics (ECNS), Forestry (FORS, WILD), Geosciences (GEO), Management Information Systems (BMIS), and Physics (PHSX).

**Note:**

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

## Language/Computer Science Requirement

**Rule:** Either complete the General Education Requirement Group III: Modern and Classical Language or take one course from the following list.

**Note:** Students completing a second major are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 126	Computation in the Sciences with Calculus	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
Total Hours		3

Minimum Required Grade: C-

## Requirements for the Applied Mathematics Concentration

**Rule:** Complete the following subcategories. 13-14 total credits required.

### Applied Mathematics Option: Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 274	Introduction to Differential Equations	3
M 412	Partial Differential Equations	3
Total Hours		6

Minimum Required Grade: C-

### Applied Mathematics Option: Elective Courses

**Note:** In addition, M 381 and M 485 are also recommended.

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete two of the following courses:</b>		7-8
M 414	Deterministic Models	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 472	Introduction to Complex Analysis	
Total Hours		7-8

Minimum Required Grade: C-

## Mathematics B.A. - Combinatorics and Optimization

This degree concentration differs from the BA in Mathematics without a concentration only in the Concentration Requirements.

### Bachelor of Arts - Mathematics; Combinatorics & Optimization Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 67

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note on degree specific credits:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject): 41 credits for students completing a second major, and 46 credits for students completing a minor.

**Note on the GPA requirement:**

1. A cumulative GPA of 2.0 is required for all courses used to fulfill major requirements.
2. In addition, a cumulative GPA of 2.0 is required for all mathematical sciences courses used to fulfill major requirements. (Mathematical sciences courses are those with a prefix of M or STAT.)

### General Education Requirements

#### Summary

Mathematics Core Courses	23
Mathematics Electives	23
Elective Courses	
Science Requirement	18
Foreign Language/Computer Science Requirement	3
Requirements for the Combinatorics & Optimization Concentration (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
Total Hours	67

## Mathematics Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
Total Hours		23

Minimum Required Grade: C-

## Mathematics Electives

**Rule:** Complete 23 credits in this category.

**Note:**

1. Students completing a minor (in another subject) need take only 20 credits.
2. Students completing a second major need take only 18 credits.

**Elective Courses**

**Note:**

1. Students completing a minor in another subject or a second major need take only 6 courses.
2. Residency Requirement: At least 4 of the courses in this category must be taken at UM-Missoula (only 3 if M 307 is taken at UM-Missoula).
3. Note that STAT 451 does not count toward this requirement.



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4. In addition to counting towards this requirement, M 429 (History of Mathematics) is also an advanced college writing course. Most Mathematics majors use M 429 to meet the advanced college writing general education requirement.

		Course List
CODE	TITLE	HOURS
<b>Complete 7 courses from the following list; at least 3 of them must be at the 400 level:</b>		
M 274	Introduction to Differential Equations	
M 301	Teaching Mathematics with Technology	
M 311	Ordinary Differential Equations and Systems	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	

## University Of Montana

M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	

Minimum Required Grade: C-

### Elective Computer Labs and Independent Study Courses

**Rule:** Computer labs and independent study courses from the following list are optional; if taken (0-2 credits), they count toward the total number of credits required for the Mathematics Elective requirement.

CODE	TITLE	HOURS
M 275	Differential Equations Computer Lab	1
M 363	Linear Optimization Laboratory	1
M 392	Independent Study	variable
M 418	Partial Differential Equations Computer Lab	1
M 492	Independent Study	variable
STAT 392	Independent Study	variable
STAT 457	Computer Data Analysis I	1
STAT 458	Computer Data Analysis II	1
STAT 492	Independent Study	variable

Minimum Required Grade: C-

### Science Requirement

**Rule:** Take 18 credits in at most 3 areas selected from astronomy (ASTR), biology (BIO\*), chemistry (CHMY), computer science (CSCI, except CSCI TR\*), economics (ECNS), forestry (FORS, WILD), geosciences (GEO), management information systems (BMIS), and physics (PHSX).

**Note:**

## University Of Montana

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

### Language/Computer Science Requirement

**Rule:** Either complete the General Education Requirement Group III: Modern and Classical Language or take one course from the following list.

**Note:** Students completing a second major are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 126	Computation in the Sciences with Calculus	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
Total Hours		3

Minimum Required Grade: C-

### Requirements for the Combinatorics & Optimization Concentration

**Rule:** Complete the following subcategories. 12-13 total credits required.

**Combinatorics & Optimization Option: Core Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 361	Discrete Optimization	3
M 362	Linear Optimization	3
M 485	Graph Theory	3
Total Hours		9

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Minimum Required Grade: C-

**Combinatorics & Optimization Concentration: Elective Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
CSCI 332	Advanced Data Structures and Algorithms	
M 414	Deterministic Models	
M 440	Numerical Analysis	
STAT 341	Introduction to Probability and Statistics	
Total Hours		3-4

Minimum Required Grade: C-

## Mathematics B.A. - Mathematics Education

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - Mathematics; Mathematics Education Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 67-68

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:**

1. The number of degree specific credits required is significantly higher if one also counts the additional course work required by the Teacher Education Program.
2. Note that the Teacher Education Program requires in addition an overall cumulative GPA of at least 2.75.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Mathematical Sciences Courses Required for the Mathematics Education Concentration	41-42
Core Courses	
Elective Course	
Mathematics Teaching Methods Course	
Student Teaching Requirement for the Mathematics Education Concentration	14
Science Requirement for the Mathematics Education Concentration	12
Secondary Teaching Licensure	
Total Hours	67-68

## Mathematical Sciences Courses Required for the Mathematics Education Concentration

**Rule:** The courses in this category must be completed with a cumulative GPA of at least 2.75.

### Core Courses

#### Note:

1. Residency Requirement: At least 4 of the upper-division courses in this category must be taken at UM Missoula (only 3 if the Elective Course is an upper-division course taken at UM-Missoula).
2. Note that taking M 429 satisfies the Advanced College Writing Requirement for this degree.
3. STAT 451 can be substituted for STAT 341, if STAT 451 is not selected as the elective course.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 301	Teaching Mathematics with Technology	3
M 307	Introduction to Abstract Mathematics	3
M 326	Number Theory	3
M 429	History of Mathematics	3
M 431	Abstract Algebra I	4
M 439	Euclidean and NonEuclidean Geometry	3
STAT 341	Introduction to Probability and Statistics	3
or STAT 451	Statistical Methods I	
Total Hours		34

Minimum Required Grade: C-

**Elective Course**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 273	Multivariable Calculus	
M 274	Introduction to Differential Equations	
M 325	Discrete Mathematics	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 432	Abstract Algebra II	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 451	Statistical Methods I	
STAT 452	Statistical Methods II	
Total Hours		3-4

Minimum Required Grade: C-

**Mathematics Teaching Methods Course**



## University Of Montana

**Note:** The course number EDU 497 covers many different teaching methods courses. The section of EDU 497 entitled "Methods: 5 - 12 Mathematics" is required for the Mathematics Education concentration.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Student Teaching Requirement for the Mathematics Education Concentration

CODE	TITLE	HOURS
<b>Complete the following course:</b>		14
EDU 495	Student Teaching	
Total Hours		14

Minimum Required Grade: C-

### Science Requirement for the Mathematics Education Concentration

**Rule:** Complete 12 credits in at most two areas selected from astronomy (ASTR), biology (BIO\*), chemistry (CHMY), computer science (CSCI, except CSCI TR\*), economics (ECNS), forestry (FORS, WILD), geosciences (GEO), management information systems (BMIS), and physics (PHSX).

**Note:**

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach mathematics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Mathematics B.A. - Pure Mathematics

This degree concentration differs from the BA in Mathematics without a concentration only in the Concentration Requirements.

### Bachelor of Arts - Mathematics; Pure Mathematics Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 68

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note on degree specific credits:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject):

- 44 credits for students completing a second major, and
- 47 credits for students completing a minor.

**Note on the GPA requirement:**

1. A cumulative GPA of 2.0 is required for all courses used to fulfill major requirements.
2. In addition, a cumulative GPA of 2.0 is required for all mathematical sciences courses used to fulfill major requirements. (Mathematical sciences courses are those with a prefix of M or STAT.)

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Mathematics Core Courses	23
Mathematics Electives	23
Elective Courses	
Science Requirement	18
Foreign Language/Computer Science Requirement	3
Requirements for the Pure Mathematics Concentration (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
Total Hours	67

### Mathematics Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
Total Hours		23

Minimum Required Grade: C-

### Mathematics Electives

# University Of Montana

**Rule:** Complete 23 credits in this category.

**Note:**

1. Students completing a minor (in another subject) need take only 20 credits.
2. Students completing a second major need take only 18 credits.

Minimum Required Grade: C-

## Elective Courses

**Note:**

1. Students completing a minor in another subject or a second major need take only 6 courses.
2. Residency Requirement: At least 4 of the courses in this category must be taken at UM-Missoula (only 3 if M 307 is taken at UM-Missoula).
3. Note that STAT 451 does not count toward this requirement.
4. In addition to counting towards this requirement, M 429 (History of Mathematics) is also an advanced college writing course. Most Mathematics majors use M 429 to meet the advanced college writing general education requirement.

		Course List
CODE	TITLE	HOURS
<b>Complete 7 courses from the following list; at least 3 of them must be at the 400 level.:</b>		
M 274	Introduction to Differential Equations	
M 301	Teaching Mathematics with Technology	
M 311	Ordinary Differential Equations and Systems	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	

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M 429	History of Mathematics	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	

Minimum Required Grade: C-

**Elective Computer Labs and Independent Study Courses**

**Rule:** Computer labs and independent study courses from the following list are optional; if taken (0-2 credits), they count toward the total number of credits required for the Mathematics Elective requirement.

CODE	TITLE	HOURS
M 275	Differential Equations Computer Lab	1
M 363	Linear Optimization Laboratory	1
M 392	Independent Study	variable
M 418	Partial Differential Equations Computer Lab	1
M 492	Independent Study	variable
STAT 392	Independent Study	variable
STAT 457	Computer Data Analysis I	1
STAT 458	Computer Data Analysis II	1
STAT 492	Independent Study	variable

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete 18 credits in at most 3 areas selected from astronomy (ASTR), biology (BIO\*), chemistry (CHMY), computer science (CSCI, except CSCI TR\*), economics (ECNS), forestry (FORS, WILD), geosciences (GEO), management information systems (BMIS), and physics (PHSX).

**Note:**

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

## Language/Computer Science Requirement

**Rule:** Either complete the General Education Requirement Group III: Modern and Classical Language or take one course from the following list.

**Note:** Students completing a second major are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
CSCI 126	Computation in the Sciences with Calculus	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
Total Hours		<b>3</b>

Minimum Required Grade: C-

### Requirements for the Pure Mathematics Concentration

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		<b>15-16</b>
M 381	Advanced Calculus I	
M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
Total Hours		<b>15-16</b>

Minimum Required Grade: C-

## Mathematics B.A. - Statistics and Data Science

This degree concentration differs from the BA in Mathematics without a concentration only in the Concentration Requirements.

### Bachelor of Arts - Mathematics; Statistics and Data Science Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 67

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note on degree specific credits:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject):

- 41 credits for students completing a second major, and
- 46 credits for students completing a minor.

**Note on the GPA requirement:**

1. A cumulative GPA of 2.0 is required for all courses used to fulfill major requirements.
2. In addition, a cumulative GPA of 2.0 is required for all mathematical sciences courses used to fulfill major requirements. (Mathematical sciences courses are those with a prefix of M or STAT.)

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary



## University Of Montana

Mathematics Core Courses	23
Mathematics Electives	23
Upper-Division Elective Courses	
Elective Courses	18
Foreign Language/Computer Science Requirement	3
Requirements for the Statistics and Data Science Concentration (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
<b>Total Hours</b>	<b>67</b>

### Mathematics Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
<b>Total Hours</b>		<b>23</b>

Minimum Required Grade: C-

### Mathematics Electives

## University Of Montana

**Rule:** Complete 23 credits in this category.

**Note:**

1. Students completing a minor (in another subject) need take only 20 credits.
2. Students completing a second major need take only 18 credits.

**Elective Courses**

**Note:**

1. Students completing a minor in another subject or a second major need take only 6 courses.
2. Residency Requirement: At least 4 of the courses in this category must be taken at UM-Missoula (only 3 if M 307 is taken at UM-Missoula).
3. Note that STAT 451 does not count toward this requirement.
4. In addition to counting towards this requirement, M 429 (History of Mathematics) is also an advanced college writing course. Most Mathematics majors use M 429 to meet the advanced college writing general education requirement.

		Course List
CODE	TITLE	HOURS
<b>Complete 7 courses from the following list; at least 3 of them must be at the 400 level:</b>		
M 274	Introduction to Differential Equations	
M 301	Teaching Mathematics with Technology	
M 311	Ordinary Differential Equations and Systems	
M 325	Discrete Mathematics	
M 326	Number Theory	
M 361	Discrete Optimization	
M 362	Linear Optimization	
M 381	Advanced Calculus I	
M 412	Partial Differential Equations	
M 414	Deterministic Models	
M 429	History of Mathematics	

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M 431	Abstract Algebra I	
M 432	Abstract Algebra II	
M 439	Euclidean and NonEuclidean Geometry	
M 440	Numerical Analysis	
M 445	Statistical, Dynamical, and Computational Modeling	
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
M 472	Introduction to Complex Analysis	
M 473	Introduction to Real Analysis	
M 485	Graph Theory	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	

Minimum Required Grade: C-

**Elective Computer Labs and Independent Study Courses**

**Rule:** Computer labs and independent study courses from the following list are optional; if taken (0-2 credits), they count toward the total number of credits required for the Mathematics Elective requirement.

CODE	TITLE	HOURS
M 275	Differential Equations Computer Lab	1
M 363	Linear Optimization Laboratory	1
M 392	Independent Study	variable
M 418	Partial Differential Equations Computer Lab	1
M 492	Independent Study	variable
STAT 392	Independent Study	variable
STAT 457	Computer Data Analysis I	1
STAT 458	Computer Data Analysis II	1
STAT 492	Independent Study	variable

Minimum Required Grade: C-

## Science Requirement

**Rule:** Complete 18 credits in at most 3 areas selected from astronomy (ASTR), biology (BIO\*), chemistry (CHMY), computer science (CSCI, except CSCI TR\*), economics (ECNS), forestry (FORS, WILD), geosciences (GEO), management information systems (BMIS), and physics (PHSX).

**Note:**

1. Students completing a minor (in another subject) or a second major are exempt from this requirement.
2. Transfer courses listed on the transcript as CSCI TR\* may include course work in other areas such as Computer Applications (CAPP) and therefore do not count towards this requirement unless a student successfully petitions the Department of Mathematical Sciences.

Minimum Required Grade: C-

## Language/Computer Science Requirement

**Rule:** Either complete the General Education Requirement Group III: Modern and Classical Language or take one course from the following list.

**Note:** Students completing a second major are exempt from this requirement.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 126	Computation in the Sciences with Calculus	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
Total Hours		3

Minimum Required Grade: C-

## Requirements for the Statistics and Data Science Concentration

**Note:** Additional mathematics and statistics courses chosen with advisor.

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
M 461	Data Science Analytics	
M 462	Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms	
STAT 341	Introduction to Probability and Statistics	
STAT 421	Probability Theory	
STAT 422	Mathematical Statistics	
STAT 452	Statistical Methods II	
Total Hours		12

Minimum Required Grade: C-

## Mathematics Minor

A handout with detailed advice for Math minors, including suggested curricula, is available on the Math Department's home page.

### Minor - Mathematics

#### College of Humanities & Sciences

**Degree Specific Credits:** 23

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Calculus Requirement for a Minor in Mathematics	4
Elective Courses for a Minor in Mathematics	19
Total Hours	23

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### Calculus Requirements for a Minor in Mathematics

**Notes:**

1. M 172 or M 182 are recommended since they are prerequisites for many upper-division mathematics courses.
2. Notice to Transfer Students: Mathematical Sciences courses that are not equivalent to courses taught at UM-Missoula can often be counted toward a Minor in Mathematics. This is determined on an individual basis; please contact the Department of Mathematical Sciences for details.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
M 162	Applied Calculus	
M 172	Calculus II	
M 182	Honors Calculus II	
Total Hours		4

Minimum Required Grade: C-

## Elective Courses for a Minor in Mathematics

**Rule:** Take 23 credits in M or STAT courses offered at UM-Missoula. M courses must be numbered M 115 or higher (excluding M 118). Courses must include at least three courses chosen from M 274 and 3- or 4-credit courses at the 300 level or above. At least two of the three courses must be taken at UM-Missoula.

**Note:**

1. The required Calculus course (M 162, M 172, or M 182) counts toward the 23 credits, as well as its prerequisite courses at the 100-level (e.g., M 171 or M 121).
2. Notice to Transfer Students: Mathematical Sciences courses that are not equivalent to courses taught at UM-Missoula can often be counted toward a Minor in Mathematics. This is determined on an individual basis; please contact the Department of Mathematical Sciences for details.

Minimum Required Grade: C-

23 Total Credits Required

## Mathematics Education Track

### Teaching Mathematics Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements

## University Of Montana

- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.
- Completing this teaching track also fulfills all requirements for the Minor in Mathematics. To earn this minor, you have to declare it using the major change form and must apply for it using the relevant graduation application form. Once you graduate, completed minors are listed on the transcript.
- Additional Mathematical Sciences Courses for the Teaching Mathematics Track

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 301	Teaching Mathematics with Technology	3
M 307	Introduction to Abstract Mathematics	3
M 326	Number Theory	3
M 439	Euclidean and NonEuclidean Geometry	3
STAT 341	Introduction to Probability and Statistics	3
or STAT 451	Statistical Methods I	
Total Hours		27

Minimum Required Grade: C-

### Mathematics Teaching Methods Course

**Note:** The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Mathematics" is required for the Teaching Minor in Mathematics Education.



CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach mathematics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Military Science

**LTC Christopher Wellman, Director**

Army ROTC (Reserve Officers' Training Corps) offers college students the opportunity to serve as commissioned officers in the U.S. Army, the Army National Guard, or the U.S. Army Reserve upon graduation. ROTC enhances a student's education by providing unique leadership and management training along with practical leadership experience. Students develop many of the qualities basic to success while earning a college degree and an officer's commission at the same time.

## The Margin of Difference

Army ROTC cadets learn to be leaders and receive hands-on experience in managing physical, financial, and human resources. They develop self-confidence and superior decision-making skills. Employers value these leadership qualities and recognize the associated potential in ROTC graduates.

## Four Year Program

The four year Army ROTC program consists of two parts:

1. the Basic Course and
2. the Advanced Course.

### Basic Course

The basic course is normally taken during the first two years of college and may be taken without incurring any military obligation. This course covers such subjects as management principles, national defense, military history, and leadership development. Basic course classes include adventure training such as squad tactics and small arms marksmanship. Additional opportunities are also available to conduct small unit training exercises throughout Western Montana. In addition, a variety of outside social and professional enrichment activities are available. All necessary ROTC textbooks, uniforms, and other essential materials for the basic course are furnished to students at no cost. After completing the basic course, students who have demonstrated the potential to become officers and who have met the physical and scholastic standards are eligible to enroll in the Advanced Course. Compression of the Basic Course into two semesters may be arranged for those students who did not take military science courses during their Freshman year.

### Advanced Course

The Advanced Course is usually taken during the final two years of college. Instruction includes organization and management, tactics, ethics, critical thinking, creative problem solving and further leadership development. Uniforms and equipment in the Advanced Course are furnished to students at no cost. During the summer between their junior and senior years of college, Advanced Course cadets attend Cadet Summer Training (CST), a fully paid four week leadership practicum. LDAC gives cadets the chance to apply what they have learned in the classroom and introduces them to Army life while also receiving academic credit. Completion of the Advanced Course requires two years of study. Each cadet in the Advanced Course receives a subsistence allowance of up to \$4,500 for each year of attendance.

## Two Year Program

The two year program applies to incoming juniors and community college graduates, students at four year colleges who did not take ROTC during their first two years of school, and students entering a two year postgraduate course of study. To enter the two year program, students must attend a fully paid four week Leader's Training Course (LTC), normally held during the summer between their sophomore and junior years of college. At LTC, students learn to challenge themselves physically and mentally, and to build their confidence and leadership skills. After successfully completing LTC, students who meet all the necessary enrollment requirements may participate in the Advanced Course.

## Scholarships and Financial Assistance

Army ROTC scholarships are offered for four, three and two years and are awarded on a competitive basis. Each scholarship pays 100% of student's tuition and fees, \$1200 a year for textbooks and supplies, and a monthly stipend totaling up to \$4,500 per year while the scholarship is in effect. Four-year scholarships are awarded to students who will be entering college as freshmen. Two and three year scholarships are awarded to students already enrolled in college and to Army enlisted personnel on active duty. Additionally, students who attend LTC (see two year program) may compete for two year scholarships while at the course. Scholarship recipients can pursue degrees in any accredited four year program at the University of Montana. Students who receive scholarships are required to attain undergraduate degrees in the fields in which their scholarships were awarded.

## Veterans

Veterans may apply their military experience as credit toward the ROTC Basic Course. If eligible, a veteran may enroll directly into the Advanced Course.

## Simultaneous Membership Program

This program allows students to be members of the Army National Guard or the Army Reserve and to enroll in Army ROTC at the same time. Students participating in the Simultaneous Membership Program receive up to \$4,000 per year in tuition assistance, \$4,500 per year in monthly stipends and an additional \$20,000 per year in other benefits. There are also scholarships available for students participating in the Simultaneous Membership Program that are interested in staying in the Army National Guard or the Army Reserve upon graduation that pay up to \$8,500 per year for living expenses and \$1,200 per year for textbooks, supplies and other equipment. These scholarships are in addition to many of the current benefits students receive as part of the Simultaneous Membership Program.

## Service Obligation

There is no military service obligation for basic course students, unless on scholarship. Advanced course and scholarship (contracted) students incur an obligation to serve in the active Army, Army Reserve or National Guard.

## Commission Requirements

## University Of Montana

In order to earn a commission as a Second Lieutenant in the United States Army, each student must:

1. Complete all required Military Science instruction while attending college as a full-time student, and obtain a baccalaureate or higher degree.
2. Complete a PMS approved US History course.
3. Meet medical and physical fitness standards.
4. Be a U.S. citizen.
5. Successfully complete Cadet Summer Training.
6. Be recommended by the Professor of Military Science.

## Undergraduate Minors

- Military Studies Minor

# Military Studies Minor

## Minor - Military Studies

### College of Humanities & Sciences

**Degree Specific Credits:** 33

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** A total of 24 credits of MSL (Military Science Leadership) courses are allowed toward the bachelors degree for contracted students. A total of 12 credits are allowed toward the bachelors degree for non-contracted students. A minimum grade of "C" or better in all courses used toward the minor and a cumulative GPA of 2.5 for Military Science courses is required.

## Summary

Lower-Divison Core Courses	12
Upper-Division Core Courses	12
War History Requirement	3
History/Political Science Requirement	6
Total Hours	33

## Lower-Division Core Courses

**Note:** The department may waive these basic course requirements in the following situations:

- prior military service,
- Advanced Individual Training (AIT),
- Leader's Training Course (LTC) or
- Accelerated Cadet Commissioning Training (ACCT).

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MSL 101	Leadership and Personal Dev	3
MSL 102	Intro to Tactical Leadership	3
MSL 201	Innovative Team Leadership	3
MSL 202	Found of Tactical Leadership	3
Total Hours		12

Minimum Required Grade: C

## Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MSL 301	Adaptive Team Leadership	3
MSL 302	Applied Team Leadership	3
MSL 401	Adaptive Leadership	3
MSL 402	Leadership in a Complex World	3
Total Hours		12

Minimum Required Grade: C

## War History Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
HSTA 316	American Civil War Era	3
or HSTA 333	American Military History	
Total Hours		3

Minimum Required Grade: C

## History/Political Science Requirement

**Rule:** Must complete six credits from the following:

**Note:** Students must complete at least 3 credits from each discipline with at least 3 credits of upper division coursework in addition to the required history course.

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		<b>3</b>
HSTR 301	Ancient Greek Social History	
HSTR 304H	Ancient Rome	
HSTA 316	American Civil War Era	
HSTA 333	American Military History	
HSTR 272E	Terrorism:Viol Mod Wrld	
<b>Compete 3 credits of the following courses:</b>		<b>3</b>
PSCI 230X	Intro to International Relations	
PSCI 335	American Foreign Policy	
Total Hours		<b>6</b>

Minimum Required Grade: C

## Multidisciplinary Studies B.A.

The Bachelor of Arts in Multidisciplinary Studies (BMS) degree at the University of Montana is intended for students seeking to complete a flexible Bachelor's degree with coursework from departments across the university, providing each student an opportunity to reach beyond disciplinary boundaries and to create a degree program that is tailored to meet their unique education and career goals. The multidisciplinary nature of the program is designed to develop students' ability to combine different fields into a structured format and is meant to encourage and support creativity, innovation, critical thinking, and integrative and experiential learning.

As part of the curriculum, students must develop a degree plan tailored to their academic and professional goals. Students will initially meet with an academic advisor from the College of Humanities & Sciences Advising Center who will assist the student in developing a proposed degree plan curriculum which must satisfy each of the following requirements:

- Earn at least 120 credits with a cumulative grade point average of 2.0 or better.
- A minimum of 30 credits must be earned from the University of Montana-Missoula
- Satisfy the University of Montana General Education requirements
  - The University of Montana will accept transfer students with completed AA or AS degrees from other regionally accredited institutions as having fulfilled their UM general education requirements.
- Complete a Multidisciplinary Studies Track, including a minimum of 39 upper division credits which satisfies the following:
  - The Track represents a cohesive set of courses from at least two different academic disciplines, with:
    - at least 15 upper division credits in one of these disciplines;
    - at least 3 of the upper division credits in a senior level capstone experience to be determined in consultation with an academic advisor (i.e. capstone, internship, applied research project, thesis, etc.)
- The Track must be approved through one of the following:
  - A committee of at least 3 faculty representatives from the academic disciplines integrated into the Track;
  - OR: A pre-approved Multidisciplinary Studies Track that has been developed in consultation with faculty from multiple disciplines, and approved by the Dean of the College of Humanities & Sciences.
- A grade of "C-" or higher must be earned in all courses in the Track.

## Bachelor of Arts - Multidisciplinary Studies

### College of Humanities & Sciences



University Of Montana

**Degree Specific Credits: 39**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Upper-Division Core Courses	39
Upper-Division Writing	
Capstone Experience	
Total Hours	39

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# Native American Studies

**Kate Shanley, Chair**

**Wade Davies, Associate Chair**

The Native American Studies Department at the University of Montana builds its curriculum on the foundation of three interrelated principles: sovereignty, indigeneity and community well-being. In so doing we pay close attention to the continuing role of traditional value systems, the impacts of colonization and the efforts toward decolonization within tribal communities. We define sovereignty broadly as one of the rights of all indigenous peoples, including both the political-legal foundations as provided in U.S. law and policy and self-determination more generally. Indigeneity underlies the unique holistic relationship that Native American communities have to the land and to the environment. In addition, our degree program not only intends to advance the well-being of our individual students, both native and non-native, but also to enhance the well-being of Indigenous communities across Montana, the United States and globally, by providing necessary and relevant education about those communities as well as the skills and knowledge for those working within those communities to do so effectively. Our curriculum and the foundations of faculty research are broadly cross-disciplinary with these principles at their base.

Native American Studies is an academic discipline committed to examining the contemporary and past experiences and life ways of the indigenous nations of North America from their perspective. The curriculum is designed to provide a study of American Indians from a holistic and humanistic viewpoint by focusing upon their cultures, history, and contemporary life. Courses are designed for both Native American and non-Native American students so they can better understand human similarities and differences, thereby leading to more effective work with and within tribal communities, through stronger knowledge bases of tribal America, and the development of better communications and cross-cultural relationships.

The Native American Studies major supports the objectives of a liberal arts education. It is interdisciplinary and provides a perspective that critically analyzes and evaluates the strengths and limitations of each contributing discipline.

## Undergraduate

- Native American Studies B.A.

## Undergraduate Minors

- Native American Studies

## Undergraduates Certificate

- Language Rejuvenation and Maintenance Certificate
- Native American Studies

# Native American Studies B.A.

## Bachelor of Arts - Native American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core Courses	12
Upper-Division Core Courses	18
Fundamentals	
Indigenous	
History	
Elective Courses	9
Total Hours	39

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NASX 105H	Intro Native Amer Studies	3
NASX 201X	Indian Cultr Exprssd Thru Lang	3
NASX 235X	Oral/Written Trads Native Amer	3
NASX 280	NA Studies Rsrch Theors/Mthds	3
Total Hours		12

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Complete the following subcategories. 18 total credits required.

### Fundamentals

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NASX 304E	Native American Beliefs/Philos	3
NASX 475	Tribal Sovereignty	3
NASX 494	Seminar/Workshop	3
Total Hours		9

Minimum Required Grade: C-

### Indigenous

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NASX 306X	Contemp Global Iss Indg People	
NASX 340	Native American Lit	
NASX 360	Native Amer and Cinema	
Total Hours		3

Minimum Required Grade: C-

### History

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		6
NASX 464	Hist Amer Indian Affrs to 1776	
NASX 465	History of American Indian Affairs in the 19th Century	
Total Hours		6

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
AAST 260	African Americans and Native Americans	
ANTY 122S	Race and Minorities	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
HSTR 369	20th Cent Amer West	
NASX 141	Elementary Blackfoot I	
NASX 142	Elementary Blackfoot II	

University Of Montana

NASX 180	Event Planning	
NASX 191	Special Topics	
NASX 198	Internship	
NASX 210X	Native Amer Sports & Games	
NASX 231X	Indig World View Perspectives	
NASX 260X	Indig Community Developmnt	
NASX 291	Special Topics	
NASX 354X	Indians of MT since Rsrvtn Era	
NASX 360	Native Amer and Cinema	
NASX 391	Special Topics	
NASX 394	Workshop/Seminar	
NASX 403	Contmp Tribal Resource Issues	
NASX 405	Gender Issues in Native American Studies	
NASX 488	Stds in Native Amer Autobio	
NASX 491	Special Topics	
NASX 499	Senior Capstone/Thesis	
PHAR 320	Am Ind Health Issues	
Total Hours		9

Minimum Required Grade: C-

# Native American Studies Minor

## Minor - Native American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Core Courses	12
Degree Electives	9
Total Hours	21

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NASX 105H	Intro Native Amer Studies	3
NASX 235X	Oral/Written Trads Native Amer	3
NASX 304E	Native American Beliefs/Philos	3
NASX 475	Tribal Sovereignty	3
Total Hours		12

Minimum Required Grade: C-

### Degree Electives

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9

University Of Montana

AAST 260	African Americans and Native Americans	
ANTY 122S	Race and Minorities	
ANTY 323X	Native Peoples of Montana	
ANTY 330X	Peoples and Cultures of World	
HSTR 369	20th Cent Amer West	
NASX 141	Elementary Blackfoot I	
NASX 142	Elementary Blackfoot II	
NASX 180	Event Planning	
NASX 191	Special Topics	
NASX 198	Internship	
NASX 201X	Indian Cultr Exprssd Thru Lang	
NASX 210X	Native Amer Sports & Games	
NASX 231X	Indig World View Perspectives	
NASX 260X	Indig Community Developmnt	
NASX 280	NA Studies Rsrch Theors/Mthds	
NASX 291	Special Topics	
NASX 306X	Contemp Global Iss Indg People	
NASX 340	Native American Lit	
NASX 354X	Indians of MT since Rsrvtn Era	
NASX 360	Native Amer and Cinema	
NASX 391	Special Topics	
NASX 394	Workshop/Seminar	
NASX 405	Gender Issues in Native American Studies	
NASX 464	Hist Amer Indian Affrs to 1776	



University Of Montana

NASX 465	History of American Indian Affairs in the 19th Century	
NASX 466	Hist of Indian Affrs from 1890	
NASX 488	Stds in Native Amer Autobio	
NASX 491	Special Topics	
NASX 499	Senior Capstone/Thesis	
Total Hours		9

Minimum Required Grade: C-

# Native American Studies Certificate

## Post-Secondary Certificate - Native American Studies

College of Humanities & Sciences

**Degree Specific Credits: 12**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Core Courses	6
Elective Courses	6
Total Hours	12

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NASX 235X	Oral/Written Trads Native Amer	3
NASX 475	Tribal Sovereignty	3
Total Hours		6

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6

University Of Montana

ANTY 150X	Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park	
ENST 489S	Environmental Justice Issues & Solutions	
HSTA 255	Montana History	
NASX 210X	Native Amer Sports & Games	
NASX 235X	Oral/Written Trads Native Amer	
NASX 260X	Indig Community Developmnt	
NASX 304E	Native American Beliefs/Philos	
NASX 306X	Contemp Global Iss Indg People	
NASX 340	Native American Lit	
NASX 430	American Indian Education	
NASX 464	Hist Amer Indian Affrs to 1776	
NASX 465	History of American Indian Affairs in the 19th Century	
PHAR 320	Am Ind Health Issues	
S W 491	Special Topics (Social Justice in Indian Country)	
Total Hours		6

Minimum Required Grade: C-

# Language Rejuvenation and Maintenance Certificate

## Post-secondary Certificate - Language Rejuvenation & Maintenance

College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Core Courses	9
Degree Electives	9
Total Hours	18

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 476	Methods for Native Languages	3
CSD 210	Speech & Language Development	3
NASX 201X	Indian Culture Expressed Through Language	3
Total Hours		9

Minimum Required Grade: C-

### Elective Courses

**Note:** ANTY 476 may be repeated to count for elective credit.

University Of Montana

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 423	Culture and Identity	
ANTY 476	Methods for Native Languages	
NASX 141	Elementary Blackfoot I	
NASX 235X	Oral/Written Traditions of Native Americans	
NASX 306X	Contemporary Global Issues of Indigenous People	
NPAD 411	Nonprofit Grant Writing	
NPAD 412	Nonprofit Fundraising	
Total Hours		9

Minimum Required Grade: C-

# Neuroscience Program

## **Richard Bridges, Program Director**

Neuroscience encompasses the study of the nervous system and brain: its structure and function, how it underlies behavior and cognition, and how it is changed with injury and disease. Interdisciplinary by design, courses are taught by faculty from the College of Humanities & Sciences and the College of Health. Neuroscientists use their understanding of the brain and cognition to pursue careers in medicine, health professions, biomedical research, education, scientific writing, law, and business. The department offers training that leads to the Bachelor of Science, Master of Science, Dual BS/MS and Doctor of Philosophy degrees.

## **Undergraduate Programs**

### **Baccalaureate Degrees**

Neuroscience B.S., Cellular and Molecular Concentration

Neuroscience B.S., Cognitive Neuroscience Concentration

### **Undergraduate Minors**

Neuroscience Minor

# Neuroscience B.S. - Cellular and Molecular Neuroscience

## Bachelor of Science - Neuroscience; Cellular and Molecular Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 76-85

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Biology/Psychology Core Courses	25
Other Required Courses	35-36
Additional Major Courses	15
Intersection Courses	1-9
Total Hours	76-85

### Biology/Psychology Core Courses

**Note:** BIOH 458 satisfies the Upper Division Writing Requirement for the Major.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NEUR 280	From Molecules to Mind - Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
NEUR 380	Cellular and Molecular Neuroscience	3
NEUR 458	Neuroscience Research	4
<b>Complete one of the following courses:</b>		4
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	
BCH 110 & BCH 111	Intro Biology for Biochemists and Intro Biol for Biochemists Lab	
Total Hours		25

Minimum Required Grade: C-

### Other Required Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
M 162	Applied Calculus	4
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	5
<b>Complete one of the following courses:</b>		
STAT 216	Introduction to Statistics	3-4
or PSYX 222	Psychological Statistics	
Total Hours		35-36

Minimum Required Grade: C-

## Additional Major Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BIOB 425	Adv Cell & Molecular Biology	3
Total Hours		9

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete 3 credits of the following courses:</b>		3
BIOB 301	Developmental Biology	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOL 435	Comparative Animal Physiology	
Total Hours		3

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOB 375	General Genetics	
BIOB 468	Endocrinology	
BIOH 441	CNS Diseases	
BMED 610	Neuropharmacology	
BMED 646	Neurotoxicology	
KIN 330	Motor Learning and Control	
PSYX 356	Human Neuropsychology	
Total Hours		3

Minimum Required Grade: C-

**Intersection Courses**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		<b>1-9</b>
BIOE 406	Behavior & Evolution	
DANC 345	New Visions Dance	
ECNS 491	Special Topics (Behavioral/Experimental Economics)	
HTH 430	Health and Mind/Body/Spirit	
PSYX 233	Fund of Psychology of Aging	
Total Hours		<b>1-9</b>

Minimum Required Grade: C-

## Neuroscience B.S. - Cognitive Neuroscience

### Bachelor of Science - Neuroscience; Cognitive Neuroscience Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 71-87

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Biology/Psychology Core Courses	25
Other Required Courses	26-33
Mathematics and Physics	
Chemistry	
Additional Major Courses	19-20
Intersection Courses	1-9
Total Hours	71-87

### Biology/Psychology Core Courses

**Note:** BIOH 458 satisfies the Upper Division Writing Requirement for the major.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	4
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NEUR 280	From Molecules to Mind - Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
NEUR 380	Cellular and Molecular Neuroscience	3
NEUR 458	Neuroscience Research	4
Total Hours		25

Minimum Required Grade: C-

## Other Required Courses

### Mathematics and Physics

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 162	Applied Calculus	4
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	5
<b>Complete one of the following courses:</b>		
STAT 216	Introduction to Statistics	3-4
or PSYX 222	Psychological Statistics	
Total Hours		17-18

## University Of Montana

Minimum Required Grade: C-

### Chemistry

CODE	TITLE	HOURS
<b>Complete one of the following Chemistry sequences:</b>		9-15
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 124	Introduction to Organic and Biochemistry Lab	
OR		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	

Minimum Required Grade: C-

### Additional Major Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BCH 380	Biochemistry	4
PSYX 270	Fund Psychology of Learning	3
PSYX 280	Fund of Memory and Cognition	3
PSYX 356	Human Neuropsychology	3
Total Hours		13

Minimum Required Grade: C-

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6-7
BIOB 301	Developmental Biology	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
BIOH 441	CNS Diseases	
BMED 610	Neuropharmacology	
BMED 646	Neurotoxicology	
KIN 330	Motor Learning and Control	
PSYX 352	Comparative Psychology	
Total Hours		6-7

Minimum Required Grade: C-

### Intersection Courses

CODE	TITLE	HOURS
<b>Complete one of the following courses</b>		1-9
BIOE 406	Behavior & Evolution	
DANC 345	New Visions Dance	
ECNS 491	Special Topics (Behavioral/Experimental Economics)	
HTH 430	Health and Mind/Body/Spirit	
PSYX 233	Fund of Psychology of Aging	
Total Hours		1-9

Minimum Required Grade: C-

# Neuroscience Minor

## Minor - Neuroscience

College of Humanities & Sciences

**Degree Specific Credits:** 19-21

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

**Notes:**

### Summary

Required Courses	10
Electives	9-11
Total Hours	19-21

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N & BIOB 161N	Principles of Living Systems and Princpls of Living Systems Lab	4
NEUR 280	Fundamentals of Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II	3
Total Hours		10

Minimum Required Grade: C-

### Electives



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
Complete 3 of the following courses:		9-11
BIOH 365	Human Anatomy and Physiology for Health Professions I	
NEUR 380	Molecular Neuroscience	
NEUR 441	Central Nervous System Diseases	
NEUR 458	Neuroscience Research	
PSYX 352	Comparative Psychology	
PSYX 356	Human Neuropsychology	
Total Hourse		9-11

Minimum Required Grade: C-

# Philosophy Department

## **Paul Muench, Chair**

Philosophy is the search for an understanding of how the world as a whole hangs together and of how we are to assume our place in the world. Philosophy pursues its goal first of all historically. It is the trustee of the heritage of great philosophical texts, and it engages those texts in conversation with contemporary problems. Second, philosophy turns to the contemporary world directly and tries to illuminate and advance its concerns with ethics and art, with science and technology, with ecology and feminism, with law and medicine. Bachelor of Arts and Master of Arts degrees are offered.

Information on UM Philosophy courses can be found [here](#).

More information is available online at the [Philosophy Department website](#).

## Undergraduate

- Philosophy B.A.
- 5-Year Dual Philosophy B.A./M.A. (Environmental Philosophy Emphasis)

## Undergraduate Minors

- Philosophy
- Ethics

## Undergraduate Certificates

- Environmental Ethics
- Philosophy, Politics, and Law

# Philosophy B.A.

## Bachelor of Arts - Philosophy

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core	12
Upper-Division Core	9
History	
Value	
Metaphysics and Epistemology	
Electives	15
Upper-Division Seminar Requirement	
Advanced Writing Course	1
Total Hours	37

### Lower-Division Core

**Rule:** Complete four courses (12 credits). 12 total credits required.

**Note:** The following courses also satisfy general education requirements:

- PHL 210E fulfills the "Intermediate Writing" and "Ethics and Human Values" requirements.
- PHL 261Y and PHL 262Y both fulfill the "Democracy and Citizenship" requirement.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHL 210E	Moral Philosophy	3
PHL 233	Intro to Logic: Deduction	3
PHL 261Y	History of Ancient Philosophy	3
PHL 262Y	History of Modern Philosophy	3
Total Hours		12

Minimum Required Grade: C-

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## Upper-Division Core

**Rule:** Complete three courses (9 credits) with one course (3 credits) in each of the following three content areas. 9 total credits required.

### I. History

**Note:** Special Topics courses taught at the 300- or 400-level (PHL 391 and PHL 491) may count as upper-division area courses provided that they have a suitable content (consult the department advisor).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PHL 403	Early Wittgenstein	
PHL 404	Later Wittgenstein	
PHL 449	History of Moral and Political Philosophy	
PHL 462	Early Modern Philosophy	
PHL 464	Kant	
PHL 465	Plato	
PHL 466	Aristotle	
PHL 467	19th Century Continental Philosophy	
PHL 468	20th Century Continental Philosophy	
PHL 469	Rousseau	
PHL 470	Hegel	
PHL 472	Thoreau	
Total Hours		3

Minimum Required Grade: C-

## II. Value

**Note:** Special Topics courses taught at the 300- or 400-level (PHL 391 and PHL 491) may count as upper-division area courses provided that they have a suitable content (consult the department advisor).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PHL 412	Ethics and Public Affairs	
PHL 422	Environmental Philosophy	
PHL 427	Topics in Philosophy of Art	
PHL 429	Philosophy and Literature	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
PHL 469	Rousseau	
PHL 470	Hegel	
PHL 472	Thoreau	
Total Hours		3

Minimum Required Grade: C-

### III. Metaphysics and Epistemology

**Note:** Special Topics courses taught at the 300- or 400-level (PHL 391 and PHL 491) may count as upper-division area courses provided that they have a suitable content (consult the department advisor).

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PHL 403	Early Wittgenstein	
PHL 404	Later Wittgenstein	
PHL 407	Epistemology	
PHL 408	Philosophy of Mind	
PHL 423	Science and the Environment	
PHL 445	Central Issues in Philosophy of Science	
Total Hours		3

Minimum Required Grade: C-

## Electives

**Rule:** Complete five courses (15 credits); at least three of the five courses must be at the 300-level or higher (9 credits; 6 of these 9 credits must be in courses other than 398 or 498). 15 total credits required.

**Note:** Any course taken to fulfill part of the upper-division core cannot also count as an upper-division elective.

CODE	TITLE	HOURS
<b>Complete five of the following courses:</b>		15
PHL 101L	Introduction to Philosophy	
PHL 102L	Introduction to Existentialism	
PHL 110E	Introduction to Ethics	
PHL 112E	Introduction to Ethics and Environment	
PHL 114E	Introduction to Political Ethics	
PHL 191	Special Topics	
PHL 241N	History & Philosophy of Science	
PHL 291	Special Topics	

PHL 292	Independent Study	
PHL 301	Knowledge and Reality	
PHL 309E	The Art of Living	
PHL 311	The Good, Right, Beautiful	
PHL 316	Historical Figures in Philosophy	
PHL 317E	Law and Morality	
PHL 319E	Law and Discrimination	
PHL 321E	Philosophy & Biomedical Ethics	
PHL 323	Ethics of Climate Change	
PHL 327L	Aesthetics and the Arts	
PHL 351	Philosophy and Feminism	
PHL 390	Research	
PHL 391	Special Topics	
PHL 392	Independent Study	
PHL 394	Seminar	
PHL 403	Early Wittgenstein	
PHL 404	Later Wittgenstein	
PHL 407	Epistemology	
PHL 408	Philosophy of Mind	
PHL 412	Ethics and Public Affairs	
PHL 422	Environmental Philosophy	
PHL 423	Science and the Environment	
PHL 427	Topics in Philosophy of Art	
PHL 429	Philosophy and Literature	



PHL 445	Central Issues in Philosophy of Science	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
PHL 462	Early Modern Philosophy	
PHL 464	Kant	
PHL 465	Plato	
PHL 466	Aristotle	
PHL 467	19th Century Continental Philosophy	
PHL 468	20th Century Continental Philosophy	
PHL 469	Rousseau	
PHL 470	Hegel	
PHL 472	Thoreau	
PHL 490	Research	
PHL 491	Special Topics	
PHL 492	Independent Study	
PHL 494	Seminar	
Total Hours		15

Minimum Required Grade: C-

## Upper-Division Seminar Requirement

**Rule:** Complete three courses (9 credits) at the 400-level (excluding PHL 498). 9 total credits required.

**Note:** Of the following upper-division requirements (upper-division core and upper-division electives), 9 of the required 18 credits must be at the 400-level.

## Advanced Writing Course

University Of Montana

**Rule:** Complete one course (1 credit). 1 total credit required.

**Note:** PHL 400 fulfills the Advanced College Writing requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHL 400	Advanced Writing in Philosophy	1
Total Hours		1

Minimum Required Grade: C-

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# Philosophy Minor

## Minor - Philosophy

College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students must complete a minimum of 18 credits in philosophy; at least 6 credits must be in courses numbered 300 and higher.

## Summary

Lower-Division Core	6
Electives	12
Total Hours	18

## Lower-Division Core

**Rule:** Complete PHL 210E and one additional course. 6 total credits required.

**Note:** The following courses also satisfy general education requirements:

- PHL 210E fulfills the "Approved Writing Course" and "Ethics & Human Values."
- PHL 261Y and PHL 262Y both fulfill the "Democracy and Citizenship" requirement.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHL 210E	Moral Philosophy	3
<b>Complete one of the following courses:</b>		3
PHL 233	Intro to Logic: Deduction	
PHL 261Y	History of Ancient Philosophy	
PHL 262Y	History of Modern Philosophy	
Total Hours		6

Minimum Required Grade: C-

## Electives

**Rule:** Complete four courses (12 credits); at least two courses must be at the 300-level or higher (6 credits). 12 total credits required.

**Notes:**

- Any course taken to fulfill a lower-division core requirement cannot also count as an elective.
- Special Topics courses taught at the 400-level (PHL 491) may count as upper-division core courses provided that they have a suitable content (consult the department advisor).

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
PHL 101L	Introduction to Philosophy	
PHL 102L	Introduction to Existentialism	
PHL 110E	Introduction to Ethics	
PHL 112E	Introduction to Ethics and Environment	
PHL 114E	Introduction to Political Ethics	
PHL 191	Special Topics	
PHL 233	Intro to Logic: Deduction	

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PHL 241N	History & Philosophy of Science	
PHL 261Y	History of Ancient Philosophy	
PHL 262Y	History of Modern Philosophy	
PHL 291	Special Topics	
PHL 292	Independent Study	
PHL 301	Knowledge and Reality	
PHL 309E	The Art of Living	
PHL 311	The Good, Right, Beautiful	
PHL 316	Historical Figures in Philosophy	
PHL 317E	Law and Morality	
PHL 319E	Law and Discrimination	
PHL 321E	Philosophy & Biomedical Ethics	
PHL 323	Ethics of Climate Change	
PHL 327L	Aesthetics and the Arts	
PHL 351	Philosophy and Feminism	
PHL 390	Research	
PHL 391	Special Topics	
PHL 392	Independent Study	
PHL 394	Seminar	
PHL 403	Early Wittgenstein	
PHL 404	Later Wittgenstein	
PHL 407	Epistemology	
PHL 408	Philosophy of Mind	
PHL 412	Ethics and Public Affairs	

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PHL 422	Environmental Philosophy	
PHL 423	Science and the Environment	
PHL 427	Topics in Philosophy of Art	
PHL 429	Philosophy and Literature	
PHL 445	Central Issues in Philosophy of Science	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
PHL 462	Early Modern Philosophy	
PHL 464	Kant	
PHL 465	Plato	
PHL 466	Aristotle	
PHL 467	19th Century Continental Philosophy	
PHL 468	20th Century Continental Philosophy	
PHL 469	Rousseau	
PHL 470	Hegel	
PHL 472	Thoreau	
PHL 490	Research	
PHL 491	Special Topics	
PHL 492	Independent Study	
PHL 494	Seminar	
Total Hours		12

Minimum Required Grade: C-

## Ethics Minor

Understanding ethical practices and increasing ethical knowledge is important to a successful life, both personally and professionally. Tailored to students majoring in other disciplines, UM-Missoula's Ethics Minor is designed to enhance the capacities of critical thinking, social engagement, and reflection on major moral issues. The interdisciplinary curriculum provides students with training in ethical frameworks and methods to help ensure successful execution of both future professional duties and personal endeavors. Students will acquire tools for critical reflection that will help them to address the major moral challenges of the 21st century, and strengthen their ability to pursue careers in business, science, journalism, advocacy, nonprofit work, law, and health care (among others).

### Minor - Ethics

#### College of Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students must complete a minimum of 18 credits in ethics/value courses; at least 6 credits must be in courses numbered 300 and higher.

### Summary

Lower Division Ethics/Value Requirement	3
Upper Division Ethics/Value Requirement	6
Elective Ethics/Value Requirement	9
Total Hours	18

#### Lower-Division Ethics/Value Requirement

**Note:** PHL 110E, PHL 112E, and PHL 114E fulfill the Ethical & Human Values General Education requirement. PHL 210E fulfills the "Approved Writing Course" and "Ethical & Human Values" General Education requirements.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PHL 110E	Introduction to Ethics	
PHL 112E	Intro Ethics and Environment	
PHL 114E	Intro to Political Ethics	
PHL 210E	Moral Philosophy	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Ethics/Value Requirement

**Note:** Special Topics courses taught at the 300- or 400-level (PHL 391, PHL 491) may count as upper-division ethics/value courses at the discretion of the Philosophy Department advisor provided that the course has suitable content.



CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
PHL 311	The Good, Right, Beautiful	
PHL 317E	Law and Morality	
PHL 321E	Philosophy & Biomedical Ethics	
PHL 323	Ethics of Climate Change	
PHL 351	Philosophy and Feminism	
PHL 412	Ethics and Public Affairs	
PHL 422	Environmental Philosophy	
PHL 427	Topics in Philosophy of Art	
PHL 429	Philosophy in Literature	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
Total Hours		6

Minimum Required Grade: C-

## Elective Ethics/Value Requirement

**Note:** Courses that satisfy either the Lower-Division Ethics/Value requirement or the Upper-Division Ethics/Value requirement cannot also satisfy the Elective Ethics/Value requirement.

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
AHMS 270E	Medical Ethics	
BGEN 220E	Business Ethics and Social Responsibility	
CHMY 305E	Ethics, Literature and Writing in the Sciences	

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CLAS 365E	The Roots of Western Ethics	
CSCI 215E	Social & Ethical Issues in CS	
CSCI 315E	Computers, Ethics, and Society	
EDU 407E	Ethics & Policy Issues	
ENST 320E	Earth Ethics	
GEO 304E	Science and Society	
GH 316E	Talking to God: Bhagavad Gita	
HONR 122E	Ways of Knowing II	
HSTR 272E	Terrorism:Viol Mod Wrld	
HTH 475E	Legal and Ethical Issues Health and Exercise Professions	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 304E	Native American Beliefs/Philos	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 389E	Ethics and Sustainability	
PHL 110E	Introduction to Ethics	
PHL 112E	Intro Ethics and Environment	
PHL 114E	Intro to Political Ethics	
PHL 210E	Moral Philosophy	
PHL 311	The Good, Right, Beautiful	
PHL 317E	Law and Morality	
PHL 321E	Philosophy & Biomedical Ethics	
PHL 323	Ethics of Climate Change	
PHL 351	Philosophy and Feminism	
PHL 412	Ethics and Public Affairs	

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PHL 422	Environmental Philosophy	
PHL 427	Topics in Philosophy of Art	
PHL 429	Philosophy in Literature	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
PSCI 250E	Intro to Political Theory	
RLST 281E	Comparative Ethics	
S W 410E	Social Work Ethics	
Total Hours		9

Minimum Required Grade: C-

# Environmental Ethics Certificate

## Post-Secondary Certificate - Environmental Ethics

College of Humanities & Sciences

**Degree Specifics:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Core Courses	6
Elective Courses	6
Total Hours	12

### Core Ethics Courses

**Rule:** Only one of these courses may be taken at the 100-level.

CODE	TITLE	HOURS
<b>Complete two of the following core ethics courses:</b>		6
PHL 110E	Intro to Ethics	
PHL 112E	Intro to Ethics and Environment	
PHL 323	Ethics of Climate Change	
PHL 422	Environmental Philosophy	
PHL 472	Thoreau	
Total Hours		6

Minimum Required Grade: C-

### Elective Courses

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**Rule:** At least one must be at the 400 or 500 level.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
COMX 347	Rhetoric, Nature, and Environmentalism	
COMX 349	Communication, Consumption, and Climate	
ENST 225S	Sustainable Communities	
ENST 230H	Nature and Society	
ENST 320E	Earth Ethics	
ENST 335L	The Environmental Vision	
ENST 367	Environmental Politics & Policies	
ENST 410	TEK of Indigenous Peoples	
ENST 420	US Environmental Movement	
ENST 430	Culture & Agriculture	
ENST 480	Food, Justice, and Sustainability	
ENST 487	Globalization, Justice & Environment	
ENST 489S	Environmental Justice Issues & Solutions	
HSTR 364	Environmental History	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 304E	Native American Beliefs and Philosophy	
NRSM 265	Elements of Ecological Restoration	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics and Policy	
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 373	Wilderness and Civilization	

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NRSM 389E	Ethics and Sustainability	
PHL 210E	Moral Philosophy	
PHL 323	Ethics of Climate Change	
PHL 422	Environmental Philosophy	
PHL 472	Thoreau	
PHL 505	Issues in the Anthropocene	
PSCI 332	Global Environmental Politics	
PSCI 442	Environmental Policy	
PTRM 482	Wilderness & Protected Area Management	
PTRM 582	Concept of Wilderness & PA	
SOCI 470	Environmental Sociology	
Total Hours		6

Minimum Required Grade: C-

## Philosophy, Politics, and Law Certificate

The Philosophy, Politics, and Law (PPL, pronounced “People”) certificate provides students with the opportunity to learn about the philosophical foundations, history, and social practice of human rights and liberties in modern democracies. Students are expected to gain a deep understanding of how our legal and political institutions have functioned in the past, how they currently function, and how they ought to function, as well as how citizens might play a meaningful role in them.

While philosophical analysis focuses on what constitutes legitimate political authority and its exercise over individual behavior, one also need to understand how human social and political life actually works. Conversely, one’s grasp of political, legal, and social behavior is greatly enriched by a conceptual and foundational perspective on the norms of behavior. Political Science, philosophy, and other disciplines such as history, sociology, or economics are thus perfectly complementary when it comes to advancing one’s understanding of our legal and political institutions.

Students who successfully complete the PPL certificate will gain substantial knowledge of democratic political ideas, practices, and institutions from multiple disciplines as well as solid skills in reading, writing, oral communication, and analytic thinking. This is a useful background for students planning to pursue graduate degrees in law, philosophy, political science, or history. It is also a good springboard for careers in business, public service, international affairs, journalism, and teaching.

The PPL certificate requires students to take a total of 27 credits (9 courses), including 9 credits (3 courses) in philosophy, 9 credits (3 courses) in political science, and 9 credits (3 courses) in either history, sociology, or economics. In philosophy and political science, it is required that at least 1 course (3 credits) be upper-division in each discipline. The certificate will be easy to complete for students who decide to major or minor in either philosophy or political Science, or both.

Courses taken to fulfil the PPL certificate also satisfy a wide range of general education requirements, including E, H, S, X and Y.

To stay in the program, students must maintain an overall G.P.A. of 3.0. All courses chosen for the certificate must be completed with a grade of C or better.

The certificate is jointly administered by the Department of Philosophy, the Department of Political Science, and the Pre-Law Program. Primary contacts are Prof. Soazig Le Bihan (soazig.lebihan@umontana.edu) and Prof. Ramona Grey (ramona.grey@umontana.edu), Chair of the Political Science Department.

Students interested in pursuing the PPL certificate must receive formal approval from one of the primary contacts listed above.

## Post-Secondary Certificate - Philosophy, Politics, and Law

### College of Humanities & Sciences

**Degree Specifics:** 27

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

## Summary

Philosophy	9
Political Science	9
History, Sociology, and Economics	9
Total Hours	27

## Philosophy

**Rule:** At least one of the course taken must be upper-division (300-level or above).



CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
PHL 110E	Introduction to Ethics	
PHL 112E	Intro Ethics and Environment	
PHL 114E	Intro to Political Ethics	
PHL 210E	Moral Philosophy	
PHL 233	Intro to Logic: Deduction	
PHL 311	The Good, Right, Beautiful	
PHL 316	Historical Figures in Philosophy	
PHL 317E	Law and Morality	
PHL 318	Applied Logic	
PHL 323	Ethics of Climate Change	
PHL 412	Ethics and Public Affairs	
PHL 449	History of Moral and Political Philosophy	
PHL 450	Contemporary Moral/Political Theory	
PHL 455	Philosophy of Society and Culture	
PHL 502	Topics in Value Theory	
Total Hours		9

Minimum Required Grade: C-

## Political Science

**Rule:** At least one of the course taken must be upper-division (300-level or above).

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
PSCI 210S	Intro to American Government	
PSCI 220S	Intro to Comparative Government	
PSCI 230X	Intro to International Relations	
PSCI 250E	Intro to Political Theory	
PSCI 320	Exp Offering: Comp Politics	
PSCI 332	Global Environmental Politics	
PSCI 345	American Political System	
PSCI 352Y	American Political Thought	
PSCI 370	Courts and Judicial Politics	
PSCI 381	State Formation	
PSCI 433	International Law & Org	
PSCI 443	Politics of Social Movements	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		9

Minimum Required Grade: C-

### History, Sociology, and Economics

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
AAST 141H	Black: From Africa to Hip-Hop	

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ECNS 217	Issues in Economic Development	
ECNS 310	Intro to Health Economics	
ECNS 312	Labor Economics	
ECNS 313	Money and Banking	
ECNS 320	Public Finance	
ECNS 405	Game Theory	
ECNS 406	Industrial Organization	
ECNS 433	Economics of the Environment	
HSTA 101H	American History I	
HSTA 102H	American History II	
HSTA 103H	Honors American History I	
HSTA 104H	Honors American History II	
HSTA 315	Early American Republic	
HSTA 320	Birth of Modern US	
HSTA 321	America in Crisis	
HSTA 322	U.S. History: WWII to Present	
HSTA 323	U.S. in the 1950s	
HSTA 324	U.S. in the 1960s	
HSTA 342H	Afr Amer Hist to 1865	
HSTA 343H	Afr Amer Hist Since 1865	
HSTA 344	African-American Struggle for Equality	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	

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HSTA 377	Alcohol in American History	
HSTA 380	American Constitutional History	
HSTA 382H	History of American Law	
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTR 101H	Western Civilization I	
HSTR 102H	Western Civilization II	
HSTR 103H	Honors Western Civilization I	
HSTR 104H	Honors Western Civilization II	
HSTR 272E	Terrorism:Viol Mod Wrld	
SOCI 211S	Introduction to Criminology	
SOCI 220S	Race, Gender & Class	
SOCI 221	Criminal Justice System	
SOCI 260S	Introduction to Juvenile Delinquency	
SOCI 312	Criminal Adjudication	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	
SOCI 345	Sociology of Organizations	
SOCI 355	Population and Society	
SOCI 382	Soc Psych and Social Structure	
SOCI 423	Sociology of Corrections	
SOCI 435	Law and Society	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	

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SOCI 455	Classical Sociological Theory	
SOCI 485	Political Sociology	
Total Hours		9

Minimum Required Grade: C-

## Physics and Astronomy Department

### **Andrew S. Ware, Chair**

Physics is considered to be the most fundamental of all disciplines in the natural sciences. In physics we try to describe and understand a myriad of physical phenomena ranging from subatomic to cosmological scales by quantifying the relationships among different physical quantities. Not only does physics have its own merit as a challenging but exciting scientific endeavor, it provides the basis for understanding underlying processes in astronomy, biology, chemistry, geology, computer science, engineering, and even in behavioral sciences. Applications of physics are virtually unlimited: computers, communications, energy production, medical technology, and space flight, to name just a few. The Department of Physics and Astronomy offers a range of physics courses from introductory to advanced undergraduate level in both experimental and theoretical physics with computational methods in mind. In addition, we offer introductory to advanced astronomy and astrophysics courses in which astronomical applications of physics are emphasized. These courses deal with the Universe, from the solar system to clusters of galaxies, both theoretically and observationally. The Department of Physics and Astronomy offers the Bachelor of Arts degree with a major in physics. Graduates with this degree are prepared for further study in physics or related fields at the masters or Ph.D. level, as well as a wide variety of technical positions in industry.

In addition, the department offers three concentrations that combine a solid background in the study of physics with in-depth study in other fields. These concentrations allow for specialization in related fields and provide appropriate background for certain employment opportunities and for continued graduate or professional study. For more details, see the related sections of this catalog.

- Astronomy
- Computational Physics
- Engineering Physics
- Teaching Broadfield Science

### **Baccalaureate Degrees**

- Physics B.A.
- Physics B.A., Astronomy Concentration
- Physics B.A., Computational Physics Concentration
- Physics B.A., Engineering Physics Concentration
- Physics B.A., Teaching Broadfield Science Concentration

### **Undergraduate Minors**

- Astronomy Minor
- Physics Minor

## Physics B.A.

### Bachelor of Arts - Physics

College of Humanities & Sciences

**Degree Specific Credits: 68**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Physics	10
Upper-Division Physics	30
Physics Electives	6
Math Requirements	16
Computer Science Requirements	3
Advanced College Writing Requirement	3
Teaching Physics Track	
Total Hours	68

### Lower-Division Physics

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics (strongly recommended):</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Upper-Division Physics



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 320	Classical Mechanics	3
PHSX 323	Intermediate Physics Lab	3
PHSX 343	Modern Physics	3
PHSX 423	Electricity & Magnetism I	3
PHSX 444	Advanced Physics Lab	3
PHSX 461	Quantum Mechanics I	3
PHSX 499	Senior Capstone Seminar	1
<b>Complete two of the following courses:</b>		6
PHSX 425	Electricity & Magnetism II	
PHSX 446	Thermodyn & Stat Mech	
PHSX 462	Quantum Mechanics II	
Total Hours		30

Minimum Required Grade: C-

## Physics Electives

**Note:** Other PHSX courses may be substituted with adviser approval.

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
PHSX 141N	Einstein's Relativity	
or ASTR 142N	The Evolving Universe	
PHSX 327	Optics	
PHSX 330	Communicating Physics	
PHSX 333	Computational Physics	
PHSX 425	Electricity & Magnetism II (2 of these 3 courses must be taken in the physics core, the remaining course can be used as an elective)	
or PHSX 446	Thermodyn & Stat Mech	
or PHSX 462	Quantum Mechanics II	
Total Hours		6

Minimum Required Grade: C-

## Math Requirements

**Note:** M 317, M 412, and M 418 are recommended as well

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
Total Hours		16

Minimum Required Grade: C-

### Computer Science Requirements

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 100	Intro to Programming	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
PHSX 333	Computational Physics (strongly recommended)	
Total Hours		3

Minimum Required Grade: C-

### Advanced College Writing Requirement

**Note:** May substitute another advanced writing course as approved by the department chair.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHSX 330	Communicating Physics	3
Total Hours		3

Minimum Required Grade: C-

## Teaching Physics Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Physics Track Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach physics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Physics B.A. - Astronomy

The astronomy concentration provides a thorough study of astronomy and astrophysics as well as a solid background in physics and mathematics. Graduates from this program have gone on to graduate programs in astronomy and astrophysics while others have found career opportunities at national astronomical observatories.

### Bachelor of Arts - Physics; Astronomy Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 69

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Physics Core	10
Lower-Division Astronomy Core	4
Upper-Division Physics Core	12
Upper-Division Astronomy Core	9
Major Electives	12
Physics Electives	
Physics Laboratory Electives	
Math Requirements	16
Computer Science Electives	3
Advanced College Writing Requirement	3
Total Hours	69

### Lower-Division Physics Core

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics (strongly recommended):</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

### Lower-Division Astronomy Core

**Rule:** Complete all of the courses in one of the two options. 4 total credits required.

#### Astronomy Core: Option 1

CODE	TITLE	HOURS
<b>If option 1 is chosen, complete all of the following courses:</b>		
ASTR 132N	Stars, Galaxies, and the Universe	3
ASTR 135N	Stars, Galaxies, and the Universe Lab	1
Total Hours		4

Minimum Required Grade: C-

#### Astronomy Core: Option 2

CODE	TITLE	HOURS
<b>If option 2 is chosen, complete the following course:</b>		
ASTR 142N	The Evolving Universe	4
Total Hours		4

Minimum Required Grade: C-

### Upper-Division Physics Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 343	Modern Physics	3
PHSX 461	Quantum Mechanics I	3
PHSX 499	Senior Capstone Seminar	1
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Astronomy Core

**Note:** In addition, ASTR 351 and ASTR 362 are recommended.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ASTR 353	Galactic Astrophysics	3
ASTR 363	Stellar Astr & Astrophys I	3
ASTR 365	Stellar Ast & Astrophys II	3
Total Hours		9

Minimum Required Grade: C-

## Major Electives

**Rule:** Complete the following subcategories of courses. 12 total credits required.

### Physics Electives

CODE	TITLE	HOURS
Complete three of the following courses:		9
ASTR 351	Planetary Science	
PHSX 320	Classical Mechanics	
PHSX 327	Optics	
PHSX 333	Computational Physics	
PHSX 423	Electricity & Magnetism I	
PHSX 425	Electricity & Magnetism II	
PHSX 446	Thermodyn & Stat Mech	
PHSX 451	Elementary Particle Physics	
PHSX 462	Quantum Mechanics II	
PHSX 491	Special Topics	
Total Hours		9

Minimum Required Grade: C-

### Physics Laboratory Electives

CODE	TITLE	HOURS
Complete one of the following laboratory courses:		3
ASTR 362	Observational Astronomy	
PHSX 323	Intermediate Physics Lab	
PHSX 444	Advanced Physics Lab	
Total Hours		3

Minimum Required Grade: C-



## Math Requirements

**Note:** In addition, M 317, M 412, and M 418 are recommended.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
Total Hours		16

Minimum Required Grade: C-

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## Computer Science Electives

CODE	TITLE	HOURS
<b>Select one of the following courses:</b>		3
CSCI 100	Intro to Programming	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
PHSX 333	Computational Physics (strongly recommended)	
Total Hours		3

Minimum Required Grade: C-

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## Advanced College Writing Requirement

**Note:** May substitute another advanced writing course as approved by the department chair.

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
PHSX 330	Communicating Physics	3
Total Hours		3

Minimum Required Grade: C-

## Physics B.A. - Computational Physics

The computational physics concentration provides a thorough study of computer science and computational physics as well as a solid background in physics and mathematics. Graduates from this program have gone on to graduate programs in physics and computer science while others have found career opportunities in technical fields.

### Bachelor of Arts - Physics; Computational Physics Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 73

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Course List		
CODE	TITLE	HOURS
Lower-Division Physics Core		10
Upper-Division Physics Core		18
Physics Elective		3
Math Requirements		19
Computer Science Requirements		20
Computer Science Core Courses		
Computer Science Electives		
Advanced College Writing Requirement		3
Total Hours		73

### Lower-Division Physics Core

Course List		
CODE	TITLE	HOURS
Complete one of the following Physics sequences:		10
Algebra- and Trigonometry-based Physics:		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
Calculus-based Physics (strongly recommended):		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

### Upper-Division Physics Core

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 320	Classical Mechanics	3
PHSX 333	Computational Physics	3
PHSX 343	Modern Physics	3
PHSX 423	Electricity & Magnetism I	3
PHSX 499	Senior Capstone Seminar	1
Total Hours		18

Minimum Required Grade: C-

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## Physics Elective

Course List		
CODE	TITLE	HOURS
Complete one of the following courses:		3
PHSX 141N	Einstein's Relativity	
PHSX 323	Intermediate Physics Lab	
PHSX 327	Optics	
PHSX 330	Communicating Physics	
PHSX 425	Electricity & Magnetism II (strongly recommended)	
PHSX 444	Advanced Physics Lab	
PHSX 446	Thermodyn & Stat Mech	
PHSX 461	Quantum Mechanics I (strongly recommended)	
PHSX 462	Quantum Mechanics II	
Total Hours		3

Minimum Required Grade: C-

## Math Requirements

**Note:** In addition, M 307, STAT 341, and STAT 458 are recommended.

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
M 221	Introduction to Linear Algebra	4
M 225	Introduction to Discrete Mathematics	3
M 273	Multivariable Calculus	4
Total Hours		19

Minimum Required Grade: C-

## Computer Science Requirements

**Rule:** Complete the following subcategories of courses. 20 total credits required.

### Computer Science Core Courses

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
CSCI 151	Interdisciplinary Computer Science I	3
CSCI 152	Interdisciplinary Computer Science II	3
CSCI 232	Intermediate Data Structures and Algorithms	4
CSCI 332	Advanced Data Structures and Algorithms	3
Total Hours		13

Minimum Required Grade: C-

### Computer Science Electives

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete 7 credits from any CSCI course numbered 200 and above. The following courses are recommended:		7
CSCI 205	Programming with C/C++	
CSCI 361	Computer Architecture	
CSCI 477	Simulation	
Total Hours		7

Minimum Required Grade: C-

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## Advanced College Writing Requirement

**Note:** May substitute another advanced writing course as approved by the department chair.

Course List		
CODE	TITLE	HOURS
Complete the following course:		
PHSX 330	Communicating Physics	3
Total Hours		3

Minimum Required Grade: C-



## Physics B.A. - Engineering Physics

The Engineering Physics concentration provides a thorough study of physics and a solid background in engineering and mathematics. Graduates from this program can go on to graduate programs in physics and engineering or seek career opportunities in technical fields.

### Bachelor of Arts - Physics; Engineering Physics Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 69

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Physics Core	10
Upper-Division Physics Core	18
Engineering Core	13
Physics and Engineering Electives	9
Mathematics Requirements	15
Computer Science Requirements	3
Advanced College Writing Requirement	3
Total Hours	69

### Lower-Division Physics Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		10
PHSX 215N	Fundamentals of Physics w/ Calculus I	4
PHSX 216N	Fundamentals of Physics w/ Calculus I Lab	1
PHSX 217N	Fundamentals of Physics w/ Calculus II	4
PHSX 218N	Fundamentals of Physics w/ Calculus II Lab	1
Total Hours		10

Minimum Required Grade: C-

### Upper-Division Physics Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 323	Intermediate Physics Lab	3
PHSX 343	Modern Physics	3
PHSX 423	Electricity & Magnetism I	3
PHSX 446	Thermodynamics & Stat Mech	3
PHSX 499	Senior Capstone Seminar	1
Total Hours		18

Minimum Required Grade: C-

### Engineering Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EGEN 101	Intro to Engineering Calculation & Problem Solving	3
EGEN 201	Engineering Statics	3
EGEN 202	Dynamics	3
EELE 201	Circuits I for Engineering	4
Total Hours		13

Minimum Required Grade: C-

## Physics and Engineering Electives

**Rule:** Choose 9 additional upper division credits in physics or engineering.

**Note:** Other physics and engineering courses may be substituted with adviser approval.

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
EGEN 335	Fluid Mechanics	
PHSX 320	Classical Mechanics	
PHSX 327	Optics	
PHSX 330	Communicating Physics	
PHSX 333	Computational Physics	
PHSX 425	Electricity & Magnetism II	
PHSX 444	Advanced Physics Lab	
PHSX 461	Quantum Mechanics I	
PHSX 462	Quantum Mechanics II	
Total Hours		9

Minimum Required Grade: C-

## Math Requirements

**Note:** In addition, M 317, M 412, and M 418 are recommended.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
M 274	Introduction to Differential Equations or Ordinary Differential Equations/Systems	3
Total Hours		15

Minimum Required Grade: C-

## Computer Science Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 151	Interdisciplinary Computer Science I	
PHSX 333	Computational Physics (strongly recommended)	
Total Hours		3

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Note:** May substitute another advanced writing course as approved by the department chair.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHSX 330	Communicating Physics	3
Total Hours		3

University Of Montana

Minimum Required Grade: C-

## Physics B.A. - Teaching Broadfield Science

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the Teacher Education Program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements

## Bachelor of Arts - Physics; Broadfield Teaching Science Concentration

### College of Humanities & Sciences

**Degree Specific Credits:** 83-84

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education and Human Sciences for more information. A major GPA of 2.75 is required to be eligible for student teaching.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Physics Requirements	24
Required Physics Courses	
Physics Elective	
Math Requirements	15
Statistics Requirements	3-4
Astronomy Requirements	4
Geology Requirements	7
Biology Requirements	12
Chemistry Requirements	11
Advanced College Writing Requirement	3
Teaching Methods Requirement	4
Total Hours	83-84

## Physics Requirements

**Rule:** Complete the following subcategories. 24 total credits required.

### Required Physics Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 330	Communicating Physics	3
PHSX 343	Modern Physics	3
Total Hours		21

Minimum Required Grade: C-

### Physics Elective

CODE	TITLE	HOURS
<b>Complete 1 additional upper division Physics course.</b>		3
Total Hours		3

### Math Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
M 311	Ordinary Differential Equations and Systems	3
Total Hours		15



Minimum Required Grade: C-

### Statistics Requirements

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
STAT 216	Introduction to Statistics	3-4
or STAT 341	Introduction to Probability and Statistics	
Total Hours		3-4

Minimum Required Grade: C-

### Astronomy Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ASTR 131N	Planetary Astronomy	3
ASTR 134N	Planetary Astronomy Lab	1
Total Hours		4

Minimum Required Grade: C-

### Geology Requirements

**Rule:** Complete the following subcategories. 7 total credits required.

#### Required Geology Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		4

## University Of Montana

Minimum Required Grade: C-

### Geology Electives

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ASTR 351	Planetary Science	
GEO 105N	Oceanography	
Total Hours		3

Minimum Required Grade: C-

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### Biology Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

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### Chemistry Requirements

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
CHMY 485	Laboratory Safety	1
Total Hours		11

Minimum Required Grade: C-

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## Advanced College Writing Requirement

**Note:** May substitute another advanced writing course as approved by the department chair.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHSX 330	Communicating Physics	3
Total Hours		3

Minimum Required Grade: C-

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## Teaching Methods Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

## University Of Montana

**Note:** For endorsement to teach physics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Astronomy Minor

## Minor - Astronomy

College of Humanities & Sciences

**Degree Specific Credits:** 25-26

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Mathematics prerequisites for the Astronomy minor are M 171, M 172, and M 273

## Summary

Lower-Division Physics Courses	10
Lower-Division Astronomy Courses	6-7
Core Course	
Core Elective	
Electives	9
Total Hours	25-26

## Lower-Division Physics Courses

**Note:** The Physics with Calculus series (PHSX 215N - PHSX 218N) is strongly recommended.

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

## Lower-Division Astronomy Courses

**Rule:** Complete the following subcategories of courses. 6-7 total credits required.

### Core Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ASTR 131N	Planetary Astronomy	3
Total Hours		3

Minimum Required Grade: C-

### Core Elective

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
ASTR 132N	Stars, Galaxies, and the Universe	3-4
or ASTR 142N	The Evolving Universe	
Total Hours		3-4

Minimum Required Grade: C-

### Electives

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ASTR 351	Planetary Science	
ASTR 353	Galactic Astrophysics	
ASTR 362	Observational Astronomy	
ASTR 363	Stellar Astr & Astrophys I	
Total Hours		9

Minimum Required Grade: C-

# Physics Minor

## Minor - Physics

College of Humanities & Sciences

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Mathematics prerequisites for the physics minor are M 171, M 172, M 273, (and M 221 if needed).

## Summary

Required Lower-Division Courses	10
Upper-Division Core Course	3
Elective Courses	11
Teaching Physics Track	
Total Hours	24

## Required Lower-Division Courses

**Note:** The Physics with Calculus series (PHSX 215N - PHSX 218N) is strongly recommended.



University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following Physics sequences:</b>		10
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
<b>Calculus-based Physics (strongly recommended):</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

### Upper-Division Core Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PHSX 301	Intro Theoretical Physics	3
Total Hours		3

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
<b>Complete 11 credits of the following courses, 8 of which must be upper-division:</b>		11
PHSX 141N	Einstein's Relativity	
PHSX 291	Special Topics	
PHSX 311	Oscillations and Waves	
PHSX 320	Classical Mechanics	
PHSX 323	Intermediate Physics Lab	
PHSX 327	Optics	
PHSX 330	Communicating Physics	
PHSX 333	Computational Physics	
PHSX 343	Modern Physics	
PHSX 423	Electricity & Magnetism I	
PHSX 444	Advanced Physics Lab	
PHSX 446	Thermodyn & Stat Mech	
PHSX 461	Quantum Mechanics I	
PHSX 462	Quantum Mechanics II	
Total Hours		11

Minimum Required Grade: C-

## Teaching Physics Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements

## University Of Montana

- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Physics Track Requirements:

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach physics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Political Science Department

### **Peter Koehn, Chair**

Political Science is the systematic study of politics. Politics influence how people and institutions exercise and resist power. Political Science, therefore, is concerned with how nations and communities are governed and who governs them. The departmental faculty members have as their mission the engagement and enlightenment of their students, professional colleagues, and fellow citizens about the nature of politics.

The department offers a varied undergraduate curriculum covering domestic, foreign, and international politics. By meeting the requirements outlined below, a student may earn a bachelor's degree in political science or in political science-history; a minor in political science or global public health; or a bachelor's degree in political science with a concentration in one of the following: American politics, international relations and comparative politics, public administration and public policy, non-profit administration, international development studies, or public law. A Master of Arts degree in political science and a Master of Public Administration degree are also offered.

The scope of the faculty's interest and research is wide. They bring special insights gained through study and residence in Europe, Russia, Africa, Central Asia, India, the Far East and Latin America, as well as in Montana and Washington, D.C.

Courses offered in the department are designed to: (1) assist students to secure a broad liberal education and to equip them with the foundations for American citizenship; (2) provide undergraduate preparation for those students who propose to continue study at the graduate level with the ultimate goal of college teaching and research; (3) offer a broad program of training for those students who plan careers in government or politics; (4) assist in preparing students for careers in teaching at both the elementary and secondary levels; (5) provide a sound background for those students who intend to enroll in law and other professional schools.

The major fields of political science are (1) American government and politics with national, state and local government, and public law as sub-fields; (2) public administration and public policy; (3) political theory; (4) comparative government; (5) international relations, organization and law. Majors are eligible for membership in Pi Sigma Alpha, the national political science honorary and are active in student political activities. The Department of Political Science secures a number of legislative and administrative internships in state and local government each year. Internships and other learning opportunities in Washington, D.C., are also available.

## Baccalaureate Degrees

- Political Science B.A.
- Political Science B.A., American Politics Concentration
- Political Science B.A., International Relations & Comparative Politics Concentration
- Political Science B.A., Public Administration and Public Policy Concentration
- Political Science B.A., Public Law Concentration

## Undergraduate Minors

University Of Montana

- Political Science

## **Undergraduate Certificates**

- Migration Studies

University Of Montana

# Political Science B.A.

## Bachelor of Arts - Political Science

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students pursuing a general political science degree must take a minimum of 37 credits of political science, including one 300-400 level course in four of the five major fields.

- 21 of the 37 credits must be in upper-division courses.
- No more than 7 credits of PSCI 492 and PSCI 498 combined may count toward the 37 required credits.
- A maximum of 60 PSCI credits can count towards the Political Science Major. An internship is strongly recommended.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Required Courses	12
Upper-Division Writing	1
Required Upper-Division Field Courses	12
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Degree Electives	12
Teaching Government Track	
Total Hours	37

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Writing

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PSCI 400	Adv Writing in Pol Science	1
Total Hours		1

Minimum Required Grade: C-

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### Required Upper Division Field Courses

**Rule:** Complete one upper-division course in four of the five fields listed below -- 12 total credits required. Any field course can also be counted toward a Political Science concentration.

**Note:** PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

#### **Public Administration and Public Policy**



University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills (enrollment with consent of instructor)	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Comparative Government**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 420	Exp Offering: Comp Politics	
PSCI 381	State Formation	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Degree Electives**

**Note:** PSCI courses may only count toward one category of requirements.

CODE	TITLE	HOURS
<b>Complete twelve additional elective credits from PSCI courses numbered 300 and above.</b>		12
Total Hours		12

Minimum Required Grade: C-

## Teaching Government Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Government Track Requirements

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach government, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Political Science B.A. - American Politics

## Bachelor of Arts - Political Science; American Politics Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Notes:** Students majoring in Political Science with a concentration in American Politics option must take a minimum of 37 credits of political science, including one 300-400 level course in four of the five major fields.

- 21 of the 37 credits must be in upper-division courses.
- No more than 7 credits of PSCI 492 and PSCI 498 combined may count toward the 37 required credits.
- A maximum of 60 PSCI credits can count towards the Political Science Major.

Students can use the same 300/400 course to fulfill both an upper-division field requirement and the degree electives for the concentration, but they cannot double-count the course credits.

An internship is strongly recommended.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Required Courses	12
Upper-Division Required Courses	1
Degree Electives in American Politics	12
Required Upper-Division Field Courses	12
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Total Hours	37

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Required Courses



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete the following course:</b>		
PSCI 400	Adv Writing in Pol Science	1
Total Hours		1

Minimum Required Grade: C-

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**Degree Electives in American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		12

Minimum Required Grade: C-

**Required Upper-Division Field Courses**

## University Of Montana

**Rule:** Complete one upper-division course in four of the five fields listed below -- 12 total credits required. Any field course can also be counted toward a Political Science concentration.

**Note:** PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

### **Public Administration and Public Policy**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 448	Health Care Policy	
PSCI 349	Montana Government and Politics	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills (enrollment with consent of instructor)	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Comparative Government**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-



# Political Science B.A. - International Relations and Comparative Politics

## Bachelor of Arts - Political Science; International Relations & Comparative Politics Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students majoring in Political Science with an concentration in International Relations and Comparative Politics must take a minimum of 37 credits of political science, including one 300-400 level course in four of the five major fields.

- 21 of the 37 credits must be in upper-division courses.
- No more than 7 credits of PSCI 492 and PSCI 498 combined may count toward the 37 required credits.
- A maximum of 60 PSCI credits can count towards the Political Science Major.
- To complete the concentration with 37 credits, students should complete the four Required Upper-Division Field Courses with one course from the International Relations list and one course from the Comparative Government list. As shown below, students who do so need just four additional courses in IR and Comparative to complete the concentration.

Two years of a foreign language study and/or a study-abroad program is strongly recommended.

An internship is also recommended.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Required Courses	12
Upper-Division Required Course	1
Degree Electives in International Relation and Comparative Politics	12
Required Upper Division Field Courses, including one each in IR and Comparative Politics	12
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Total Hours	37

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Required Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PSCI 400	Adv Writing in Pol Science	1
Total Hours		1

Minimum Required Grade: C-

### Degree Electives in International Relation and Comparative Politics

CODE	TITLE	HOURS
<b>Complete 4 of the following courses:</b>		12
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	

University Of Montana

PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 463	Development Administration	
PSCI 480	Research Goals and Strategies (counts as IR or Comparative with consent of instructor)	
PSCI 481	Origins of Democracy and Authoritarianism	
PSCI 482	Politics of the World Economy	
Total Hours		12

Minimum Required Grade: C-

## Required Upper-Division Field Courses

**Rule:** Complete one upper-division course in four of the five fields listed below. 12 total credits required.

**Notes:**

- To complete the concentration with 37 credits, students should complete the four Required Upper-Division Field Courses with one course from the International Relations list and one course from the Comparative Government list.
- PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

### **Public Administration and Public Policy**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 442	Environmental Policy	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		3

Minimum Required Grade: C-

**Comparative Government**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**



University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-

# Political Science B.A. - Public Administration and Public Policy

## Bachelor of Arts - Political Science; Public Administration and Public Policy Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students majoring in Political Science with an concentration in Public Administration and Public Policy must take a minimum of 37 credits of political science, including one 300-400 level course in four of the five major fields.

- 21 of the 37 credits must be in upper-division courses.
- No more than 7 credits of PSCI 492 and PSCI 498 combined may count toward the 37 required credits.
- A maximum of 60 PSCI credits can count towards the Political Science Major.

Students can use the same 300/400 course to fulfill both an upper-division field requirement and the degree electives for the concentration, but they cannot double-count the course credits.

A legislative or administrative internship is strongly recommended.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Required Courses	12
Upper-Division Required Courses	1
Degree Electives in Public Administration and Public Policy	12
Required-Upper Division Field Courses	12
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Total Hours	37

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Required Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PSCI 400	Adv Writing in Pol Science	1
Total Hours		1

Minimum Required Grade: C-

### Degree Electives in Public Administration and Public Policy

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 442	Environmental Policy	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	

PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 480	Research Goals and Strategies (counts as PAPP with consent of instructor)	
PSCI 524	Management & Policy Skills (enrollment with consent of instructor)	
Total Hours		12

Minimum Required Grade: C-

### Required Upper-Division Field Courses

**Rule:** Complete one upper-division course in four of the five fields listed below -- 12 total credits required. Any field course can also be counted toward a Political Science concentration.

**Note:** PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

#### Public Administration and Public Policy

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 442	Environmental Policy	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills (enrollment with consent of instructor)	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Comparative Government**



University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-

# Political Science B.A. - Public Law

## Bachelor of Arts - Political Science; Public Law Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 37

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students majoring in Political Science with an concentration in Public Law must take a minimum of 37 credits of political science, including one 300-400 level course in four of the five major fields.

- 21 of the 37 credits must be in upper-division courses.
- No more than 7 credits of PSCI 492 and PSCI 498 combined may count toward the 37 required credits.
- A maximum of 60 PSCI credits can count towards the Political Science Major.

Students can use the same 300/400 course to fulfill both an upper-division field requirement and the degree electives for the concentration requirements, but they cannot double-count the course credits.

An internship is strongly recommended.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Lower-Division Required Courses	12
Upper-Division Required Courses	1
Degree Electives in Public Law	12
Required Upper-Division Field Courses	12
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Total Hours	37

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Required Courses

## University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
PSCI 400	Adv Writing in Pol Science	1
Total Hours		1

Minimum Required Grade: C-

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### Degree Electives in Public Law

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
NASX 475	Tribal Sovereignty	
PSCI 345	American Political System	
PSCI 352Y	American Political Thought	
PSCI 370	Courts and Judicial Politics	
PSCI 433	International Law & Org	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		12

Minimum Required Grade: C-

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### Required Upper Division Field Courses

**Rule:** Complete one upper-division course in four of the five fields listed below -- 12 total credits required. Any field course can also be counted toward a Political Science concentration.

**Note:** PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

#### **Public Administration and Public Policy**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 442	Environmental Policy	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills (enrollment with consent of instructor)	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Comparative Government**



University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-

# Migration Studies Certificate

## Post-secondary Certificate - Migration Studies

College of Humanities & Sciences

**Degree Specific Credits:**

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Core Courses	6
Elective Courses	6
Total Hours	12

### Core Courses

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
ANTY 122S	Race and Minorities	
COMX 415	Intercultural Communication	
HSTR 230H	Colonial Latin America	
PSCI 398	Migration Studies Internship	
PSCI 431	Politics of Global Migration	
Total Hours		6

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
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<b>Complete 6 credits of the following courses:</b>		6
<b>Social, Political, and Economic Determinants:</b>		
ANTY 104	Ancient Migrations	
ECNS 217	Issues in Economic Development	
HSTA 342H	African-American History to 1865	
HSTA 343H	African-American History Since 1865	
HSTR 335	Latin American Workers and Labor History	
HSTR 437	US-Latin America Relations	
PSCI 377	Issues in Global Health	
SOCI 270	Intro Development Sociology	
SOCI 355	Population and Society	
SOCI 443	Sociology of Poverty	
SOCI 446	Prostitution & Human Trafficking	
<b>Regional Contexts:</b>		
ANTY 353	Paleoindian Archaeology	
ENST 427	Social Issues: The Mekong Delta	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 468 & 469	Community and Regional Analysis	
GRMN 317L	Multicultural Literature in Contemporary Germany	
HSTA 101H	American History I	
HSTA 102H	American History II	
HSTR 231H	Modern Latin America	

HSTR 326	Contemporary Europe	
NASX 306X	Contemporary Global issues Indigenous People	
PSCI 322	Politics of Europe	
PSCI 325	Politics of Latin America	
PSCI 327	Politics of Mexico	
PSCI 336	European Union	
SOCI 212S	Social Issues Southeast Asia	
SOCI 346	Rural Sociology	
S W 323	Women and Social Action in the Americas	
<b>Environmental Contributors</b>		
ECNS 445	International Environmental Economic & Climate Change	
ENST 487	Globalization, Justice, and Environment	
GPHY 421	Sustainable Cities	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 475	Environment & Development	
PSCI 324	Climate Policies: China & the USA	
<b>Bridging Gaps and Divisions</b>		
COMX 412	Communication and Conflict	
COMX 424	Risk, Crisis, and Communication	
GBLD 110	Global Challenges and Leadership	
HSTR 435	Latin American Human Rights and Memory	
PSCI 348 U.S.	Multicultural Politics	
PSCI 443	Politics of Social Movements	

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S W 464	Cultural Humility in Social Work Practice: Valuing Diversity	
S W 465	Social Work in a Global Context	
THTR 385	Theatre of Social Justice	
Total Hours		6

Minimum Required Grade: C-

# Political Science Minor

## Minor - Political Science

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Nine of the 21 required credits must be in 300-400-level courses.

Lower-Division Required Courses	12
Required Upper-Division Field Courses	9
Public Administration and Public Policy	
Political Theory	
Comparative Government	
International Relations	
American Politics	
Teaching Government Track	
Total Hours	21

### Lower-Division Required Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Government	3
PSCI 230X	Intro to International Relations	3
PSCI 250E	Intro to Political Theory	3
Total Hours		12

Minimum Required Grade: C-

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## Required Upper Division Field Courses

**Rule:** Must complete 1 course in 3 of the 5 following categories. 9 total credits required.

**Note:** PSCI 480 (Research Goals and Strategies) may apply to any of the following categories with the consent of the instructor.

### Public Administration and Public Policy

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CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NPAD 466	Nonprofit Adm & Pub Svc	
NPAD 467	Advanced Nonprofit Admin	
PSCI 335	American Foreign Policy	
PSCI 344	State and Local Government	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 360	Exp Offering: Public Admin	
PSCI 361	Public Administration	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 377	Issues in Global Health	
PSCI 431	Politics of Global Migration	
PSCI 442	Environmental Policy	
PSCI 448	Health Care Policy	
PSCI 460	Exp Offering: Public Admin	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 463	Development Administration	
PSCI 468	Public Policy Cycle	
PSCI 469	Ethics and Public Policy	
PSCI 524	Management & Policy Skills	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Political Theory**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 350	Exp Offering: Political Theory	
PSCI 352Y	American Political Thought	
PSCI 354	Contemp Issues in Pol Theory	
PSCI 357	Ancient & Medieval Pol Phil	
PSCI 450	Exp Offering: Political Theory	
PSCI 452	Utopianism and its Critics	
PSCI 453	Modern Political Theory	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Comparative Government**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
NASX 475	Tribal Sovereignty	
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 377	Issues in Global Health	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 443	Politics of Social Movements	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 481	Origins of Democracy and Authoritarianism	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**International Relations**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**American Politics**

University Of Montana

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
PSCI 335	American Foreign Policy	
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 349	Montana Government and Politics	
PSCI 352Y	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 448	Health Care Policy	
PSCI 468	Public Policy Cycle	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Teaching Government Track**

## University Of Montana

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Government Track Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach government, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Psychology Department

## **Allen Szalda-Petree, Chair**

Psychology is the science of the behavior of humans and other animals. The psychologist, using scientific methods, seeks to understand the causes and purposes of behavior. Psychologists pursue their research and its application in academia, business, government, health, military and social service. The department offers training that leads to the Bachelor of Arts, Master of Arts, Specialist in School Psychology (SSP), and Doctor of Philosophy degrees.

## Undergraduate

### **Baccalaureate Degrees**

- Psychology B.A.

### **Undergraduate Minors**

- Human and Family Development
- Psychology Minor



# Psychology B.A.

## Bachelor of Arts - Psychology

### College of Humanities & Sciences

**Degree Specific Credits:** 45-46

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** A minimum of 60 credits must be in non-psychology courses.

- PSYX 290, PSYX 292, and PSYX 298 are limited to 6 credit hours.
- PSYX 390, PSYX 392 and PSYX 398 are limited to 3 credit hours.
- PSYX 330, PSYX 340, PSYX 360, and PSYX 385 may only count once.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	9
Foundation Courses	12
Fundamentals Courses	6
Upper-Division Electives	15
Math Electives	3-4
Teaching Psychology Track	
Total Hours	45-46

## Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSYX 100S	Intro to Psychology	3
PSYX 120	Introduction to Psychological Research Methods	3
PSYX 222 or STAT 216	Statistics Requirement	3
Total Hours		9

Minimum Required Grade: C

### Foundation Courses

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
PSYX 233	Fund of Psychology of Aging	
PSYX 330	Child Development	
PSYX 340	Abnormal Psychology	
PSYX 360	Social Psychology	
PSYX 385	Psychology of Personality	
Total Hours		12

Minimum Required Grade: C

### Fundamentals Courses

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete two of the following courses:</b>		<b>6</b>
PSYX 250N	Fund of Biological Psychology	
PSYX 270	Fund Psychology of Learning	
PSYX 280	Fund of Memory and Cognition	
Total Hours		<b>6</b>

Minimum Required Grade: C

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## Upper-Division Electives

### Notes:

- Elective may not include PSYX 392, PSYX 398, or PSYX 499.
- PSYX 330, 340, 360, and 385 may only count towards one category within the Psychology major.

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CODE	TITLE	HOURS
<b>Complete five of the following courses:</b>		15
PSYX 320	Advanced Psychological Research Methods	
PSYX 330	Child Development (may only count once)	
PSYX 340	Abnormal Psychology (may only count once)	
PSYX 345	Child & Adolescent Psych Disorders	
PSYX 348	Psychology of Family Violence	
PSYX 352	Comparative Psychology	
PSYX 356	Human Neuropsychology	
PSYX 360	Social Psychology (may only count once)	
PSYX 362	Multicultural Psychology	
PSYX 376	Principles of Cognitive Behavioral Modification	
PSYX 378	Intro to Clinical Psychology	
PSYX 382	Forensic Psychology	
PSYX 383	Health Psychology	
PSYX 385	Psychology of Personality (may only count once)	
PSYX 390	Adv Supervised Research	
PSYX 391	Special Topics	
PSYX 400	History & System in Psychology	
PSYX 430	Counseling Theories in Context	
PSYX 491	Special Topics	
S W 423	Addiction Studies	
Total Hours		15

Minimum Required Grade: C

## Math Electives

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
M 162	Applied Calculus	
M 171	Calculus I	
Total Hours		3-4

Minimum Required Grade: C

## Teaching Psychology Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Psychology Track Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C

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## Secondary Teaching Licensure

**Note:** For endorsement to teach psychology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Psychology Minor

## Minor - Psychology

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Requirements	6
Minor Electives	12
Subcategory 1	
Subcategory 2	
Subcategory 3	
Additional Electives	3
Teaching Psychology Track	
Total Hours	21

### Lower-Division Core Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
PSYX 100S	Intro to Psychology	3
PSYX 120	Introduction to Psychological Research Methods	3
Total Hours		6

Minimum Required Grade: C

## Minor Electives

**Rule:** Complete the following subcategories, taking at least 6 upper division credits. 12 total credits required.

### Subcategory 1

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PSYX 330	Child Development	
PSYX 360	Social Psychology	
PSYX 385	Psychology of Personality	
Total Hours		3

Minimum Required Grade: C

### Subcategory 2

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PSYX 340	Abnormal Psychology	
PSYX 345	Child & Adolescent Psych Disorders	
PSYX 376	Principles of Cognitive Behavioral Modification	
PSYX 378	Intro to Clinical Psychology	
Total Hours		3

Minimum Required Grade: C

### Subcategory 3



CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
PSYX 250N	Fund of Biological Psychology	
PSYX 270	Fund Psychology of Learning	
PSYX 280	Fund of Memory and Cognition	
PSYX 352	Comparative Psychology	
PSYX 356	Human Neuropsychology	
Total Hours		6

Minimum Required Grade: C

### Additional Elective

CODE	TITLE	HOURS
<b>Complete an additional Psychology elective to achieve 21 credits.</b>		3
Total Hours		3

Minimum Required Grade: C

### Teaching Psychology Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.

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- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### *Teaching Psychology Track Requirement*

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C

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## Secondary Teaching Licensure

**Note:** For endorsement to teach psychology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Human and Family Development Minor

## Minor - Human and Family Development

College of Humanities & Sciences

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** To earn the minor in Human and Family Development, the student must complete 24 credits, with 11 at the 300-level or above. All students are required to take a 12-credit core curriculum and, with the help of a faculty advisor, to develop a written statement of goals and interests along with a planned curriculum that includes 12 additional credits of electives consistent with their stated goals and interests. At least 6 credits of electives must be outside of the student's major.

### Summary

Core Courses	12
Subcategory 1	
Subcategory 2	
Subcategory 3	
Subcategory 4	
Elective Courses	12
Total Hours	24

### Core Courses

**Rule:** Complete the following subcategories. 12 total credits required.

#### Subcategory 1

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
PSYX 330	Child Development	3
or PSYX 233	Fund of Psychology of Aging	
Total Hours		3

Minimum Required Grade: C

**Subcategory 2**

**Note:**

- HFD 494 may be taken for 1 credit.
- HFD 498 must be taken for a minimum of 2 credits.
- Education majors may take C&I 295 to fulfill the HFD 498 requirement.
- Social Work majors may use S W 495 hours to fulfill the HFD 498 requirement.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HFD 494	Seminar in Human Development	1
HFD 498	Internship	2-4
Total Hours		3-5

Minimum Required Grade: C

**Subcategory 3**

CODE	TITLE	HOURS
<b>Complete 1 of the following courses:</b>		3
COMX 311	Family Communication	
SOCI 332	Sociology of the Family	
EDEC 410	Families, Communities, Culture	
Total Hours		3

Minimum Required Grade: C

**Subcategory 4**

CODE	TITLE	HOURS
<b>Complete 1 of the following courses:</b>		<b>3</b>
C&I 520	Educational Research	
COMX 460	Research Methods	
PSYX 120	Introduction to Psychological Research Methods	
PSYX 320	Advanced Psychological Research Methods	
S W 400	Social Work Research	
SOCI 318	Sociological Research Methods	
Total Hours		<b>3</b>

Minimum Required Grade: C

## Elective Courses

**Rule:** Complete 12 credits from any of the courses listed in the subcategories below; at least 6 credits must be taken outside of the student's major.

**Note:** The list of electives is categorized to assist the student wishing to focus on one of these areas. Students may plan curricula which do not correspond to these categories, but should choose among courses from this list. Occasionally "special topics" courses are offered. Students may use these as electives with the consent of their advisors. Check with departments regarding variable-credit 395 and 495-Special Topics listings.

### Early Childhood

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
EDEC 408	Early Childhood Principles and Practices	
EDEC 410	Families, Communities, Culture	
EDU 222	Educational Psych Child Dev	
C&I 295	Special Topics	
EDSP 401	Intro Early Intervention	
CSD 210	Speech & Lang Devel	
EDSP 403	Curric/Mthds Early Spec Educ	
EDSP 462	Spec Ed Law, Policy, Practice	
EDU 346	Exceptionalities	
EDU 491	Special Topics/Exp Courses	
HFD 498	Internship	
PSYX 290	Supervised Research	
PSYX 378	Intro to Clinical Psychology	

Minimum Required Grade: C

**School-Age**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
EDU 222	Educational Psych Child Dev	
EDU 346	Exceptionalities	
PHAR 110N	Use & Abuse of Drugs	
PSYX 376	Principles of Cognitive Behavioral Modification	
PSYX 378	Intro to Clinical Psychology	
PSYX 345	Child & Adolescent Psych Disorders	
SOCI 260S	Introduction to Juvenile Delinquency	
S W 300	Hum Behav & Soc Environ	
S W 420	Child Abuse/Child Welfare	
SOCI 332	Sociology of the Family	

Minimum Required Grade: C

**Adolescence**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
EDSP 462	Spec Ed Law, Policy, Practice	
EDU 222	Educational Psych Child Dev	
EDU 346	Exceptionalities	
PHAR 110N	Use & Abuse of Drugs	
PSYX 345	Child & Adolescent Psych Disorders	
PSYX 376	Principles of Cognitive Behavioral Modification	
PSYX 378	Intro to Clinical Psychology	
S W 300	Hum Behav & Soc Environ	
S W 450	Children and Youth at Risk	

Minimum Required Grade: C

**Gerontology**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
AHHS 325	Introduction to Gerontology	
AHHS 327	MGS Meeting	
AHHS 430	Health Aspects of Aging	
AHHS 491	Special Topics	
ANTY 426	Culture, Health and Healing	
PSYX 233	Fund of Psychology of Aging	
S W 455	Social Gerontology	
S W 475	Death, Dying and Grief	

Minimum Required Grade: C

**Family Development**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
COMX 311	Family Communication	
COMX 414	Communication in Personal Relationships	
COMX 485	Communication and Health	
PSYX 348	Psychology of Family Violence	
S W 423	Addiction Studies	
SOCI 332	Sociology of the Family	

Minimum Required Grade: C



## Sociology Department

### Daisy Rooks, Chair

"Sociology is the study of social life, social change, and the social causes and consequences of human behavior. Sociologists investigate the structure of groups, organizations, and societies, and how people interact within these contexts. Since human behavior is shaped by social factors, the subject matter of sociology ranges from the intimate family to the hostile mob; from organized crime to religious cults; from the divisions of race, gender and social class to the shared beliefs of a common culture" (American Sociological Association 2002:1). The Sociology faculty at UM bring diverse theoretical perspectives to their courses and use a wide array of methodological strategies in their research and teaching. Their interests range from social issues facing our local community and the Northern Rocky Mountain region, to national and global concerns. Faculty research addresses both theoretical issues, such as the causes of criminal behavior, and practical matters, such as the effectiveness of prison rehabilitation programs or the impact of legislation on family policy and poverty programs.

In addition to a general sociology major, students may choose one of two concentrations for structuring their course work.

1. The general Sociology major provides a broad foundation in sociological theory and research, together with exposure to a variety of courses in the main substantive areas of the discipline.
2. Students interested in crime and criminal justice can choose a concentration in Criminology, while students concerned with the causes and consequences of social inequality can select an concentration Inequality and Social Justice.

These concentrations allow students to focus their studies in a particular area of interest while still acquiring a solid foundation in the discipline of Sociology.

## Baccalaureate Degrees

- Sociology B.A.
- Sociology B.A., Criminology Concentration
- Sociology B.A., Inequality and Social Justice Concentration

## Undergraduate Minors

- Sociology

## Sociology B.A.

### General Sociology Major

Students whose primary interest is in a general sociology major are urged to develop a plan of study with their advisor; they must take 24 credits (6 upper-division) in addition to the core courses and an upper-division writing course. Any sociology course, including courses from any of the two concentrations, may be included in your study plan. The general sociology major prepares students for positions which require a bachelor's degree in one of the social science disciplines, including employment in a variety of government and private-sector agencies, or for graduate study in sociology. It also provides valuable preparation for related fields such as law, social work, education, counseling, politics, and public administration.

### Bachelor of Arts - Sociology

#### College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** No more than 60 Sociology credits may count toward graduation.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Core Courses	12
General Sociology Elective	24
Upper-Division Writing Course	3
Total Hours	39

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 101S	Introduction to Sociology	3
SOCI 202	Social Statistics	3
SOCI 318	Sociological Research Methods	3
SOCI 455	Classical Sociological Theory	3
Total Hours		12

Minimum Required Grade: C-

### General Sociology Electives

CODE	TITLE	HOURS
<b>Complete 24 credits of the following courses:</b>		24
NRSM 424	Community Forestry & Conservtn	
SOCI 130S	Soc of Alternative Religions	
SOCI 211S	Introduction to Criminology	
or SOCI 260S	Introduction to Juvenile Delinquency	
SOCI 212S	Social Issues Southeast Asia	
SOCI 220S	Race, Gender & Class	
SOCI 221	Criminal Justice System	
SOCI 270	Intro Development Sociology	
SOCI 275S	Gender and Society	
SOCI 306	Sociology of Work	
SOCI 312	Criminal Adjudication	
SOCI 325	Social Stratification	

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SOCI 332	Sociology of the Family	
SOCI 335	Juvenile Justice System	
SOCI 345	Sociology of Organizations	
SOCI 346	Rural Sociology	
SOCI 350	The Community	
SOCI 355	Population and Society	
SOCI 362	Sociology of Law Enforcement	
SOCI 382	Soc Psych and Social Structure or PSYX 360 Social Psychology	
SOCI 423	Sociology of Corrections	
SOCI 435	Law and Society	
SOCI 438	Seminar in Crime & Deviance	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
SOCI 485	Political Sociology	
SOCI 488	Writing for Sociology	
SOCI 498	Internship	
S W 423	Addiction Studies	
Total Hours		24

Minimum Required Grade: C-

Upper-Division Writing Course

## University Of Montana

**Note:** A non-sociology upper division writing course from another department may be substituted for this requirement with departmental consent.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
SOCI 438	Seminar in Crime & Deviance	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 488	Writing for Sociology	
Total Hours		3

Minimum Required Grade: C-

## Teaching Sociology Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Students completing the teaching sociology track must also complete the teaching track in major or minor in a second field of their choice.

### Teaching Sociology Track Requirement

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach sociology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Sociology B.A. - Criminology

### Criminology Concentration

Criminology has been an area of study within sociology since the inception of the discipline at the turn of the twentieth century. Contemporary criminology examines the making of laws, the nature and extent of crime, the causes of crime, and society's efforts to control crime through the juvenile and criminal justice systems. The concentration builds upon the required course work in sociology and allows students to pursue extended study of crime and the criminal justice system. In addition, the concentration provides opportunity for practical experience in juvenile and criminal justice systems through internship placements. The criminology concentration prepares students for employment in public and private criminal justice agencies, as well as graduate study in sociology, criminal justice, and law.

### Bachelor of Arts - Sociology; Criminology Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** No more than 60 Sociology credits may count toward graduation.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Core Courses	12
General Sociology Electives (at least two must be upper division)	9
Upper-Division Writing Course	3
Criminology Concentration Requirements	15
Total Hours	39

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 101S	Introduction to Sociology	3
SOCI 202	Social Statistics	3
SOCI 318	Sociological Research Methods	3
SOCI 455	Classical Sociological Theory	3
Total Hours		12

Minimum Required Grade: C-

### General Sociology Electives

CODE	TITLE	HOURS
<b>Complete three of the following courses, two of which must be 300-level or above:</b>		9
NRSM 424	Community Forestry & Conservtn	
SOCI 130S	Soc of Alternative Religions	
SOCI 212S	Social Issues Southeast Asia	
SOCI 220S	Race, Gender & Class	
SOCI 270	Intro Development Sociology	
SOCI 275S	Gender and Society	
SOCI 306	Sociology of Work	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	
SOCI 345	Sociology of Organizations	
SOCI 346	Rural Sociology	
SOCI 350	The Community	



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SOCI 355	Population and Society	
SOCI 382	Soc Psych and Social Structure or PSYX 360 Social Psychology	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
SOCI 485	Political Sociology	
SOCI 488	Writing for Sociology	
SOCI 498	Internship	
Total Hours		9

Minimum Required Grade: C-

## Upper-Division Writing Course

**Note:** A non-sociology upper division writing course from another department may be substituted for this requirement with departmental consent.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
SOCI 438	Seminar in Crime & Deviance	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 488	Writing for Sociology	
Total Hours		3

Minimum Required Grade: C-

## Criminology Concentration Requirements

### Concentration Core

## University Of Montana

**Note:** Students should complete SOCI 211S or SOCI 260S, as well as SOCI 221 prior to taking advanced CRIM courses.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 221	Criminal Justice System	3
SOCI 211S	Introduction to Criminology	3
or SOCI 260S	Introduction to Juvenile Delinquency	
Total Hours		6

Minimum Required Grade: C-

### Concentration Electives

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
SOCI 312	Criminal Adjudication	
SOCI 335	Juvenile Justice System	
SOCI 362	Sociology of Law Enforcement	
SOCI 423	Sociology of Corrections	
SOCI 435	Law and Society	
SOCI 438	Seminar in Crime & Deviance	
SOCI 498	Internship	
S W 423	Addiction Studies	
Total Hours		9

Minimum Required Grade: C-

## Sociology B.A. - Inequality and Social Justice

Inequality is at the core of most sociological inquiries. The concentration in inequality and social justice examines the causes and consequences of inequalities based on class, gender, race/ethnicity, disability, age, and sexual orientation. Social inequalities at the local, national, and global levels are studied, as are the political, legal, and social processes that contribute to or reduce inequalities. Ethical elements of social justice are considered with regard to inequality. A concentration in inequality and social justice prepares students for employment in a variety of government and private-sector agencies, especially in social services, or for graduate school in Sociology. It also provides valuable preparation for related fields such as law, social work, education, counseling, politics, and public administration.

### Bachelor of Arts - Sociology; Inequality and Social Justice Concentration

#### College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** No more than 60 Sociology credits may count toward graduation.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Core Courses	12
General Sociology Electives	9
Upper-Division Writing Course	3
Inequality and Social Justice Concentration Requirements	15
Total Hours	39

#### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 101S	Introduction to Sociology	3
SOCI 202	Social Statistics	3
SOCI 318	Sociological Research Methods	3
SOCI 455	Classical Sociological Theory	3
Total Hours		12

Minimum Required Grade: C-

### General Sociology Electives

CODE	TITLE	HOURS
<b>Complete three of the following courses, two of which must be 300-level or above:</b>		9
NRSM 424	Community Forestry & Conservtn	
SOCI 130S	Soc of Alternative Religions	
SOCI 211S	Introduction to Criminology	
or SOCI 260S	Introduction to Juvenile Delinquency	
SOCI 212S	Social Issues Southeast Asia	
SOCI 221	Criminal Justice System	
SOCI 270	Intro Development Sociology	
SOCI 306	Sociology of Work	
SOCI 312	Criminal Adjudication	
SOCI 332	Sociology of the Family	
SOCI 335	Juvenile Justice System	
SOCI 345	Sociology of Organizations	

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SOCI 346	Rural Sociology	
SOCI 350	The Community	
SOCI 362	Sociology of Law Enforcement	
SOCI 382	Soc Psych and Social Structure or PSYX 360 Social Psychology	
SOCI 423	Sociology of Corrections	
SOCI 438	Seminar in Crime & Deviance	
SOCI 470	Environmental Sociology	
SOCI 488	Writing for Sociology	
SOCI 498	Internship	
S W 423	Addiction Studies	
Total Hours		9

Minimum Required Grade: C-

## Upper-Division Writing Course

**Note:** A non-sociology upper division writing course from another department may be substituted for this requirement with departmental consent.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
SOCI 438	Seminar in Crime & Deviance	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 488	Writing for Sociology	
Total Hours		3

Minimum Required Grade: C-

## Inequality and Social Justice Concentration Requirements

### Concentration Core

## University Of Montana

**Note:** Students should complete SOCI 220S or SOCI 275S first, and complete at least 2 advanced ISJ electives before taking SOCI 441.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 220S	Race, Gender & Class	3
or SOCI 275S	Gender and Society	
SOCI 441	Capstone: Inequal and Soc Just	3
Total Hours		6

Minimum Required Grade: C-

### Concentration Electives

**Note:** It is recommended that students take SOCI 442 or SOCI 498 concurrent with SOCI 441.

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
SOCI 325	Social Stratification	
SOCI 355	Population and Society	
SOCI 435	Law and Society	
SOCI 442	ISJ Service Learning	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 471	Gender and Global Development	
SOCI 485	Political Sociology	
SOCI 498	Internship	
Total Hours		9

Minimum Required Grade: C-

# Sociology Minor

## Minor - Sociology

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** To earn a minor in Sociology, the student must complete a minimum of 21 credits in Sociology with at least 9 of these credits at the upper-division level.

### Summary

Core Courses	9
General Sociology Electives	12
Teaching Sociology Track	
Total Hours	21

### Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SOCI 101S	Introduction to Sociology	3
SOCI 318	Sociological Research Methods	3
SOCI 455	Classical Sociological Theory	3
Total Hours		9

Minimum Required Grade: C-

### General Sociology Electives

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CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
NRSM 424	Community Forestry & Conservtn	
SOCI 130S	Soc of Alternative Religions	
SOCI 211S	Introduction to Criminology	
or SOCI 260S	Introduction to Juvenile Delinquency	
SOCI 221	Criminal Justice System	
SOCI 220S	Race, Gender & Class	
SOCI 270	Intro Development Sociology	
SOCI 275S	Gender and Society	
SOCI 306	Sociology of Work	
SOCI 312	Criminal Adjudication	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	
SOCI 335	Juvenile Justice System	
SOCI 345	Sociology of Organizations	
SOCI 346	Rural Sociology	
SOCI 350	The Community	
SOCI 355	Population and Society	
SOCI 362	Sociology of Law Enforcement	
SOCI 382	Soc Psych and Social Structure	
SOCI 423	Sociology of Corrections	
SOCI 435	Law and Society	
SOCI 438	Seminar in Crime & Deviance	



SOCI 441	Capstone: Inequal and Soc Just	
SOCI 442	ISJ Service Learning	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
SOCI 485	Political Sociology	
SOCI 488	Writing for Sociology	
SOCI 498	Internship (only 3 credits of internship can count towards the 12 credit limit)	
Total Hours		12

Minimum Required Grade: C-

## Teaching Sociology Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

Teaching Sociology Track Requirement

## University Of Montana

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach sociology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Women's, Gender and Sexuality Studies

## Elizabeth Hubble, Director

Women's, Gender and Sexuality Studies, an interdisciplinary program founded in 1990, encourages the production, discussion, and dissemination of knowledge about women's experiences, oppressions, and achievements in Montana, the U.S., and the world. In the last decade this focus has broadened to include study of the social and cultural construction of gender, sex, and sexualities. By fostering awareness of cultural and international diversity, as well as of the circulations of power mediated by race, class, age, and sexual orientation, Women's, Gender and Sexuality Studies encourages students to think critically and to envision justice for all peoples.

The Women's, Gender and Sexuality Studies program is administered by the director, with assistance from the program coordinator, in consultation with the Women's, Gender and Sexuality Studies Executive Committee, an interdisciplinary group of faculty and professional associates with teaching, research, and scholarly interests in women, gender and sexuality.

Students may include Women's, Gender and Sexuality Studies in their studies by earning a B.A. or by completing a minor.

Students may select coursework from a wide variety of courses offered in the humanities, social sciences, natural sciences, law, education and other disciplines. Women's, Gender and Sexuality Studies offers scholarships and sponsors or co-sponsors a variety of events including lectures, discussions, and performances that make a vibrant contribution to both the campus and the Missoula community life.

To be admitted, students must register with the Women's, Gender and Sexuality Studies director, who will explain major or minor requirements and supervise their program.

## Baccalaureate Degrees

- Women's, Gender & Sexuality Studies B.A.

## Undergraduate Minors

- Women's, Gender & Sexuality Studies

## Women's, Gender and Sexuality Studies B.A.

**Note:** Students who choose the Women's, Gender and Sexuality Studies (WGSS) B.A. must register with the WGSS advisor, who will supervise their program.

### Bachelor of Arts - Women's, Gender, & Sexuality Studies

#### College of Humanities & Sciences

Degree Specific Credits: 32

Required Cumulative GPA: 2.0

Catalog Year: 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Required Courses	14
Electives	18
Humanities Electives	
Social Science Electives	
Total Hours	32

### Required Courses

**Note:** Students must arrange a WGSS 398 internship with the WGSS Director prior to beginning their senior year. A list of available internships is available in the WGSS Office.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
WGSS 163L	Hist/Lit Persp Women	3
WGSS 263S	Social and Political Perspectives on Gender and Sexuality	3
WGSS 363	Feminist Theory and Methods	3
WGSS 398	Coop Education/Internship	3
WGSS 463	WGS Capstone	2
Total Hours		14

Minimum Required Grade: C-

## Electives

**Rule:** Of the 18 elective credits, 11 credits must be upper-division.

**Note:** Interdisciplinary courses and courses that appear on the WGSS curriculum list that do not fall within the Humanities and Social Science lists may be substituted with the approval of co-directors. WGSS Internship/Independent Study (392, 398, 492) courses may count for either the Humanities Core or the Social Science Core, depending on the topic. The following is a list of regularly offered courses that would fulfill the WGSS elective credits. Unless indicated, all courses are 3 credits. These courses are offered, in general, every one, two, or three years. Students are advised to check with the WGSS Office for individual semester course listings.

### Humanities Electives

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
AAST 141H	Black: From Africa to Hip-Hop	
CLAS 320	Women in Antiquity	
COMX 380	Gender and Communication	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
GH 151L	Introduction to Western Humanities Antiquity	

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GH 152L	Introduction to the Humanities Medieval to Modern	
GH 329	Fathers and Daughters in Western Literary Traditions	
HSTA 342H	Afr Amer Hist to 1865	
HSTA 343H	Afr Amer Hist Since 1865	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	
HSTA 377	Alcohol in American History	
HSTA 385	Families & Children in America	
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 471	Writing Women's Lives	
LIT 304	U.S. Writers of Color	
LIT 337L	Gender & Sexuality in Eng Fict	
LIT 378L	Gay and Lesbian Studies	
NASX 235X	Oral/Written Trads Native Amer	
NASX 304E	Native American Beliefs/Philos	
RLST 370	Mysticism	
WGSS 250	Media Representations of Women, Men, and Sexuality	
Total Hours		9

Minimum Required Grade: C-

**Social Science Electives**

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CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
ANTY 330X	Peoples and Cultures of World	
ANTY 427	Anthropology of Gender	
COUN 242S	Intimate Relationships	
COUN 485	Counseling Theories	
ENST 489S	Environmental Justice Issues & Solutions	
NASX 231X	Indig World View Perspectives	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 306X	Contemp Global Iss Indg People	
PSYX 348	Psychology of Family Violence	
PSYX 362	Multicultural Psychology	
S W 323	Women & Soc Action Amer	
SOCI 220S	Race, Gender & Class	
SOCI 275S	Gender and Society	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	
SOCI 346	Rural Sociology	
SOCI 355	Population and Society	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 471	Gender and Global Development	
Total Hours		9

Minimum Required Grade: C-

# Women's, Gender and Sexuality Studies Minor

## Minor - Women's, Gender, & Sexuality Studies

College of Humanities & Sciences

**Degree Specific Credits:** 20

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Requirements	3
Upper-Division Core Requirements	5
Approved Elective Courses	12
Total Hours	20

### Lower-Division Core Requirements

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WGSS 163L	Hist/Lit Persp Women	3
or WGSS 263S	Social and Political Perspectives on Gender and Sexuality	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Core Requirements



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
WGSS 363	Feminist Theory and Methods	3
WGSS 463	WGS Capstone	2
Total Hours		5

Minimum Required Grade: C-

### Approved Elective Courses

**Note:** WGSS 392, WGSS 398 and WGSS 492 (Internship/Independent Study) may be applied toward these credits

CODE	TITLE	HOURS
<b>Complete 12 credits from the following courses, at least one of which must be upper-division (300-400 level):</b>		12
Any WGSS course		
AAST 141H	Black: From Africa to Hip-Hop	
ANTY 330X	Peoples and Cultures of World	
ANTY 427	Anthropology of Gender	
CLAS 320	Women in Antiquity	
COMX 380	Gender and Communication	
COMX 447	Rhetorical Construction of Women	
COMX 449	Rhetoric of Women's Activism	
COUN 242S	Intimate Relationships	
COUN 485	Counseling Theories	
ENST 489S	Environmental Justice Issues & Solutions	
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
HSTA 342H	Afr Amer Hist to 1865	

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HSTA 343H	Afr Amer Hist Since 1865	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 361	The American South	
HSTA 370H	Wmn Amer Colonial to Civil War	
HSTA 371H	Wmn Amer Civil War to Present	
HSTA 377	Alcohol in American History	
HSTA 385	Families & Children in America	
HSTA 415	The Black Radical Tradition	
HSTA 417	Prayer & Civil Rights	
HSTA 471	Writing Women's Lives	
LIT 337L	Gender & Sexuality in Eng Fict	
LIT 378L	Gay and Lesbian Studies	
NASX 231X	Indig World View Perspectives	
NASX 235X	Oral/Written Trads Native Amer	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 304E	Native American Beliefs/Philos	
NASX 306X	Contemp Global Iss Indg People	
PSYX 348	Psychology of Family Violence	
RLST 370	Mysticism	
S W 323	Women & Soc Action Amer	
SOCI 220S	Race, Gender & Class	
SOCI 275S	Gender and Society	
SOCI 325	Social Stratification	
SOCI 332	Sociology of the Family	

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SOCI 346	Rural Sociology	
SOCI 355	Population and Society	
SOCI 441	Capstone: Inequal and Soc Just	
SOCI 443	Sociology of Poverty	
SOCI 446	Prost & Human Trafficking	
SOCI 471	Gender and Global Development	
Total Hours		12

Minimum Required Grade: C-

## World Languages and Cultures Department

**Brian Dowdle, Chair**

Instruction is offered in the following languages and literatures:

- Arabic
- Chinese
- French
- German
- Classical Greek
- Italian
- Japanese
- Latin
- Russian
- Spanish

In addition, instruction is offered in linguistics and foreign literatures in English translation, film, and the study of foreign cultures.

Undergraduate courses have been planned to meet the needs of students who began studying a language in high school as well as those who undertake such study for the first time at the University.

The courses are intended to serve several purposes:

1. Contribute to the general education of students by giving them an opportunity to gain insight into patterns of living and thinking which are different from their own;
2. Enable students to gain proficiency in the language;
3. Prepare candidates for careers in research and college teaching by providing a solid basis for graduate studies in the various languages;
4. Prepare future teachers of foreign languages;
5. Provide language training requisite to careers in government, foreign commerce, and library work;
6. Enable students to read foreign publications and to meet graduate foreign language requirements in their field.

The Department of World Languages and Cultures offers undergraduate majors in:

- Classics (Greek and Latin), with concentrations in Classical Languages (Latin and Greek), Classical Civilization, and Latin
- French

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- German
- Japanese
- Russian
- Spanish
- World Languages and Cultures

There are also undergraduate minors in:

- Arabic
- Chinese

**High School Preparation:** Credit is automatically granted for Advanced Placement scores of 3, 4, or 5. At each UM Orientation, the department offers a computerized placement/assessment examination in French, German, and Spanish. Students also can arrange individually to take the CLEP exam, administered by Testing Services in French, German, or Spanish.

These exams are not required, but serve one or more of three purposes:

1. **Exemption from the General Education Competency Requirement in Foreign Language:** if the student achieves a score that indicates a competence equivalent to the completion of French, German, or Spanish 102 (second semester). (See the General Education Requirements section of this catalog.)
2. **Placement for further study in the language:** the score achieved on this test is an accurate indicator of the course level at which language study should be resumed at the University (e.g. 102, 201, 202).
3. **Credit by examination:** A student with extensive language study may score high enough on the placement exam to qualify for University credits if she or he places into 202 or 301. By taking the course into which she or he placed (202 or 301) and receiving a B (3.00) or better, the student may then receive four by pass credits (Pass grade only) for the preceding course (201 or 202).

Students who elect not to take this exam may:

1. Satisfy the General Education Competency Requirement in Foreign Language by successfully completing a University foreign language 102 (second semester) course.
2. Estimate their placement level for further study by the approximate equating of one year of high school study to one semester of university study. Students should consult with the department in making this estimate.

**Foreign Study Programs.** The Department of World Languages and Cultures offers programs of accredited study in Austria, Chile, China, France, Germany, Italy, Japan, Spain, Mexico, and Russia. Each program is supervised by a departmental faculty member, and is open to any student who meets the respective foreign language prerequisites. (There is no language prerequisite for the Study Abroad in Italy, but Italian is recommended.) Details concerning individual programs are available from the Department of World Languages and Cultures. The department also sponsors work/study internships abroad for students in Japanese.

## Baccalaureate Degrees

## University Of Montana

- Classics B.A., Classical Civilization Concentration
- Classics B.A., Classical Languages Concentration
- Classics B.A., Latin Concentration
- French B.A.
- German B.A.
- Japanese B.A.
- Russian B.A.
- Spanish B.A.
- World Languages and Cultures B.A.

## Undergraduate Minors

- Arabic Studies
- Chinese
- Classical Civilization
- European Studies
- French
- German
- Greek
- Japanese
- Latin American Studies
- Latin
- Russian
- Russian Studies
- Spanish

## Undergraduate Certificates

- English in Academic Strength and Leadership (EASL) Certificate
- World Competencies

# Arabic Studies Minor

## Minor - Arabic Studies

College of Humanities & Sciences

**Degree Specific Credits:** 22

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** At least 6 credits must be of upper division courses. A minimum grade of C is required in all the courses taken to fulfill the minor.

## Summary

Lower-Division Core Courses	16
Upper-Division Core Courses	3
Electives	3
Total Hours	22

## Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARAB 101	Elementary Modern Standard Arabic I	4
ARAB 102	Elementary Modern Standard Arabic II	4
ARAB 201	Intermediate Modern Standard Arabic I	4
ARAB 202	Intermediate Modern Standard Arabic II	4
Total Hours		16

Minimum Required Grade: C

## Upper-Division Core Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ARAB 305	The Arab World	3
Total Hours		3

Minimum Required Grade: C

## Electives

**Note:** Before taking an independent study outside the Arabic program, you need to consult with the advisor of the minor. Upon consent of the advisor of the academic minor, up to three credits (either taken at the University of Montana or transferred from another institution) may be counted as an elective if at least 75% of the content is related to the Arab world. Below is a list of suggested courses.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ARAB 392	Independent Study	
HSTR 386	Nationalism Modern Middle East	
PSCI 320	Exp Offering: Comp Politics (Politics of the Middle East)	
PSCI 334	International Security	
Total Hours		3

Minimum Required Grade: C



# Chinese Minor

## Minor - Chinese

College of Humanities & Sciences

**Degree Specific Credits:** 29

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Courses	20
Upper-Division Electives	9
Total Hours	29

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHIN 101	Elementary Chinese I	5
CHIN 102	Elementary Chinese II	5
CHIN 201	Intermediate Chinese I	5
CHIN 202	Intermediate Chinese II	5
Total Hours		20

Minimum Required Grade: C-

### Upper-Division Electives

**Note:** With prior approval, 3 of these credits may be in China focused courses offered by other departments.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 9 credits from the following courses:</b>		<b>9</b>
CHIN 313L	Chinese Poetry in Translation	
CHIN 314L	Traditiona Chinese Literature	
CHIN 380	Chinese Folktales	
CHIN 388	Readings in Classical Chinese	
Total Hours		9

Minimum Required Grade: C-

# Classical Civilization Minor

## Minor - Classical Civilization

College of Humanities & Sciences

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Lower-Division Core	6
Language Requirement	6
Greek	
Latin	
Electives	12
Electives I	
Electives II	
Total Hours	24

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CLAS 155L	Survey of Greek and Roman Lit	3
CLAS 160L	Classical Mythology	3
Total Hours		6

Minimum Required Grade: C-

## Language Requirement

**Rule:** Must complete one of the following language sequences.

### Option One: Greek

CODE	TITLE	HOURS
<b>Greek</b>		6
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
Total Hours		6

Minimum Required Grade: C-

### Option Two: Latin

CODE	TITLE	HOURS
<b>Latin</b>		6
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
Total Hours		6

Minimum Required Grade: C-

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## Electives

**Rule:** Complete the following subcategories. 12 total credits required.

### Electives I

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
ARTH 407	Roman and Early Christian Art	
CLAS 251L	The Epic	
CLAS 252L	Greek Drama: Politics on Stage	
CLAS 320	Women in Antiquity	
CLAS 360H	Ancient Greek Civ and Culture	
CLAS 365E	The Roots of Western Ethics	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
GRK 300	Major Greek Writers	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
LATN 311	Major Latin Authors	
PHL 363	Ancient Greek and Roman Philosophy	
Total Hours		9

Minimum Required Grade: C-

**Electives II**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
HSTR 304H	Ancient Rome	
Total Hours		3

Minimum Required Grade: C-

## Classics B.A. - Classical Civilization

### Bachelor of Arts - Classics; Classical Civilization Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Classics Core Courses	24
Literature and History	
Languages: Latin or Greek	
Classics Electives	15
Total Hours	39

### Classics Core Courses

#### Literature and History

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CLAS 160L	Classical Mythology	3
CLAS 251L	The Epic	3
or CLAS 252L	Greek Drama: Politics on Stage	
CLAS 399	Capstone	3
HSTR 302H	Ancient Greece	3
or HSTR 304H	Ancient Rome	
Total Hours		12

Minimum Required Grade: C-

**Languages**

**Rule:** Complete 12 credits in one of the following options:

**Option One: Latin**

CODE	TITLE	HOURS
<b>Latin</b>		12
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
Total Hours		12

Minimum Required Grade: C-

**Option Two: Greek**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Greek</b>		12
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
Total Hours		12

Minimum Required Grade: C-

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## Classics Electives

**Note:** Classes taken in fulfillment of the Classics Core requirements cannot be counted towards electives.



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CODE	TITLE	HOURS
<b>Complete 15 credits of the following courses:</b>		15
ARTH 407	Roman and Early Christian Art	
CLAS 320	Women in Antiquity	
CLAS 360H	Ancient Greek Civ and Culture	
CLAS 365E	The Roots of Western Ethics	
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
GRK 300	Major Greek Writers	
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
HSTR 304H	Ancient Rome	
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
LATN 311	Major Latin Authors	
PHL 363	Ancient Greek and Roman Philosophy	
PHL 465	Plato	
PHL 466	Aristotle	
Total Hours		15

Minimum Required Grade: C-

## Classics B.A. - Classical Languages

### Bachelor of Arts - Classics; Classical Languages Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Classics Core Courses	24
Literature and History	
Languages: Latin or Greek	
Classical Language Electives	15
Total Hours	39

### Classics Core Courses

#### Literature and History

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CLAS 160L	Classical Mythology	3
CLAS 251L	The Epic	3
or CLAS 252L	Greek Drama: Politics on Stage	
CLAS 399	Capstone	3
HSTR 302	Ancient Greece	3
or HSTR 304H	Ancient Rome	
Total Hours		12

Minimum Required Grade: C-

**Languages**

**Rule:** Complete 12 credits in one of the following options.

**Option One: Latin**

CODE	TITLE	HOURS
<b>Latin</b>		12
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
Total Hours		12

Minimum Required Grade: C-

**Option Two: Greek**

CODE	TITLE	HOURS
<b>Greek</b>		12
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
Total Hours		12

Minimum Required Grade: C-

## Classical Language Electives

**Rule:** Complete an additional 15 credits of Greek and Latin Language. A minimum of 9 credits in each language is required. Classes taken in fulfillment of the Classics Core cannot be counted towards Classical Language Electives.

CODE	TITLE	HOURS
<b>Complete 15 credits of the following courses:</b>		15
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
GRK 300	Major Greek Writers	
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
LATN 311	Major Latin Authors	
Total Hours		15

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Minimum Required Grade: C-

# Classics B.A. - Latin Concentration

## Bachelor of Arts - Classics; Latin Concentration

College of Humanities & Sciences

**Degree Specific Credits:** 39

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Classics Core Courses	24
Literature and History	
Languages	
Advanced Latin Language	9
Latin Major Electives	6
Teaching Latin Track	
Total Hours	39

### Classics Core Courses

#### Literature and History

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CLAS 160L	Classical Mythology	3
CLAS 251L	The Epic	3
or CLAS 252L	Greek Drama: Politics on Stage	
CLAS 399	Capstone	3
HSTR 304H	Ancient Rome	3
Total Hours		12

Minimum Required Grade: C-

### Languages

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LATN 101	Elementary Latin I	3
LATN 102	Elementary Latin II	3
LATN 201	Intermediate Latin I	3
LATN 202	Intermediate Latin II	3
Total Hours		12

Minimum Required Grade: C-

### Advanced Latin Language

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
LATN 311	Major Latin Authors	
LATN 391	Special Topics	
LATN 392	Independent Study	
LATN 492	Independent Study	
Total Hours		9

Minimum Required Grade: C-

### Latin Major Electives

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
ARTH 407	Roman and Early Christian Art	
CLAS 320	Women in Antiquity	
CLAS 360H	Ancient Greek Civ and Culture	
CLAS 365E	The Roots of Western Ethics	
HSTR 301	Ancient Greek Social History	
HSTR 302	Ancient Greece	
MCLG 410	Methods Teaching Foreign Language	
PHL 363	Ancient Greek and Roman Philosophy	
PHL 465	Plato	
PHL 466	Aristotle	
Total Hours		6

Minimum Required Grade: C-

### Teaching Latin Track



**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

**Teaching Latin Track Requirements**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTH 407	Roman and Early Christian Art	3
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		6

Minimum Required Grade: C-

**Note:** For endorsement to teach Latin, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# European Studies Minor

## Minor - European Studies

College of Humanities & Sciences

**Degree Specific Credits:** 33-37

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

### Summary

Core Courses	3
Foreign Language	12-16
Upper-Division Electives	18
Total Hours	33-37

### Core Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MCLG 110	Introduction to European Studies	3
Total Hours		3

Minimum Required Grade: C-

### Foreign Language

CODE	TITLE	HOURS
<b>Complete one of the following language sequences:</b>		12-16
<b>Ancient Greek</b>		

GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
<b>French</b>		
FRCH 101	Elementary French I	
FRCH 102	Elementary French II	
FRCH 201	Intermediate French I	
FRCH 202	Intermediate French II	
<b>German</b>		
GRMN 101	Elementary German I	
GRMN 102	Elementary German II	
GRMN 201	Intermediate German I	
GRMN 202	Intermediate German II	
<b>Latin</b>		
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
<b>Russian</b>		
RUSS 101	Elementary Russian I	
RUSS 102	Elementary Russian II	
RUSS 201	Intermediate Russian I	
RUSS 202	Intermediate Russian II	

<b>Spanish</b>		
SPNS 101	Elementary Spanish I	
SPNS 102	Elementary Spanish II	
SPNS 201	Intermediate Spanish I	
SPNS 202	Intermediate Spanish II	
Total Hours		12-16

Minimum Required Grade: C-

## Upper-Division Electives

**Note:** Two lower-division courses in a second European language may be substituted for two of the six required upper-division courses, subject to advisor approval.

CODE	TITLE	HOURS
<b>Complete six of the following courses (at least three courses must come from two different disciplines offered outside of the student's primary major):</b>		18
English		
FILM 320	Shakespeare and Film	
LIT 327	Shakespeare	
LIT 329	Fathers and Daughters in Western Literary Traditions	
LIT 350L	Chaucer	
LIT 351	Donne & His Followers	
LIT 353L	Milton	
LIT 355	British Romanticism	
<b>Modern &amp; Classical Languages &amp; Literatures</b>		
CLAS 320	Women in Antiquity	
CLAS 360H	Ancient Greek Civ and Culture	

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CLAS 365E	The Roots of Western Ethics	
FRCH 310	Fr. Lit. Cult. Mid. Age Renass	
FRCH 311	Fr. Lit. Cult. 17th 18th Cent.	
FRCH 312	Fr. Lit. Cult. Long 19th Cent.	
FRCH 313	Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century	
FRCH 338	The French Cinema	
FRCH 350	French Civ & Culture	
FRCH 420	Studies in French Prose	
FRCH 430	Studies in French Drama	
FRCH 440	Studies in French Poetry	
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
GRMN 322L	Survey of German Cinema	
GRMN 340L	Nature and the Environment in German Literature and Film	
GRMN 351H	German Culture: Beginnings to Romanticism	
GRMN 352H	Germ Culture: Romanticism to the Present	
GRMN 431	German Literature 1760-1832	
GRMN 441	19th Century German Literature	

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GRMN 451	20th and 21st Century German Literature	
RUSS 306L	Evil and the Supernatural in Russian Literature	
RUSS 307L	Beauty, Power and Pride in Russian Literature	
RUSS 411	19th-Century Russian Authors	
RUSS 412	20th-Century Russian Authors	
RUSS 424	Russian Short Story	
RUSS 440	Russian Poetry	
RUSS 494	Seminar in Russian Studies	
SPNS 326	Contemporary Spanish Lit	
SPNS 465	Spanish Lit:Renaiss/Goldn Age	
SPNS 466	Spanish Lit:Modern & Contemp	
<b>European History</b>		
HSTR 320	European Social and Intellectual History: 1450-1789	
HSTR 323	European Social and Intellectual History: The 19th Century	
HSTR 325	European Social and Intellectual History: The 20th Century	
HSTR 326	Contemporary Europe	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	
HSTR 350	Modern Britain	
HSTR 352	France Revol 1789-1848	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	

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HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 363	Eastern Europe	
<b>Global Humanities</b>		
GH 327L	Gender & Sexuality in Eng Fict	
Religious Studies		
RLST 335	Western Religious Thought I	
RLST 336	Western Religious Thought II	
<b>Music</b>		
MUSI 301H	Music History I	
MUSI 302H	Music History II	
<b>Art History</b>		
ARTH 407	Roman and Early Christian Art	
ARTH 425	Art of the Renaissance	
ARTH 440	20th Century Art	
ARTH 465	Spanish Art	
Total Hours		18

Minimum Required Grade: C-

## French B.A.

### Bachelor of Arts - French

#### College of Humanities & Sciences

**Degree Specific Credits:** 27

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Students are required to maintain a minimum overall GPA of 2.5 in all upper-division French courses presented in fulfillment of requirements for the French major. Must complete a minimum of 30 French upper division credits. FRCH 101 through FRCH 202, or equivalent, are a prerequisite for this major. A minimum of twelve upper-division credits for the major must be taken from UM faculty on the UM campus.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Upper-Division Core		9
300-level Degree Electives		12
400-level Courses		6
Teaching French Track		
Total Hours		27

### Upper-Division Core



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FRCH 301	Adv Grammar/Oral Writ Exprsn	3
FRCH 350	French Civ & Culture	3
FRCH 421	Adv Stylistics & Oral Arg	3
Total Hours		9

Minimum Required Grade: C-

### 300-level Degree Electives

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
FRCH 310	Fr. Lit. Cult. Mid. Age Renass	
FRCH 311	Fr. Lit. Cult. 17th 18th Cent.	
FRCH 312	Fr. Lit. Cult. Long 19th Cent.	
FRCH 313	Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century	
FRCH 338	The French Cinema	
FRCH 339	Surv African Cinema	
Total Hours		12

Minimum Required Grade: C-

### 400-level Courses

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
FRCH 420	Studies in French Prose	
FRCH 421	Adv Stylistics & Oral Argument	
FRCH 430	Studies in French Drama	
FRCH 491	Special Topics	
FRCH 494	Seminar/Workshop	
Total Hours		6

Minimum Required Grade: C-

## Teaching French Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- French qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in French. Students should complete the requirements for a second teaching endorsement in another field in more demand in high schools.
- Study in a French speaking country, provided either through the university's Study Abroad Program or an experience considered to be equivalent, also is required.

### Teaching French Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		6

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach French, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# French Minor

## Minor - French

### College of Humanities & Sciences

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** FRCH 101-FRCH 202, or equivalent, are prerequisites to the minor in French. A minimum of six upper-division credits for the minor must be taken from UM faculty on the UM campus.

## Summary

Upper-Division Core	6
Electives	9
Teaching French Track	
Total Hours	15

## Upper-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FRCH 301	Adv Grammar/Oral Writ Exprsn	3
FRCH 350	French Civ & Culture	3
Total Hours		6

Minimum Required Grade: C-

## Degree Electives

**Rule:** Complete the following subcategories. 9 total credits required.

### 300-Level Courses

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CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		<b>6</b>
FRCH 310	Fr. Lit. Cult. Mid. Age Renass	
FRCH 311	Fr. Lit. Cult. 17th 18th Cent.	
FRCH 312	Fr. Lit. Cult. Long 19th Cent.	
FRCH 313	Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century	
FRCH 338	The French Cinema	
Total Hours		<b>6</b>

Minimum Required Grade: C-

**400-Level Courses**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		<b>3</b>
FRCH 420	Studies in French Prose	
FRCH 421	Adv Stylistics & Oral Arg	
FRCH 430	Studies in French Drama	
FRCH 440	Studies in French Poetry	
FRCH 491	Special Topics	
FRCH 492	Independent Study	
FRCH 494	Seminar/Workshop	
Total Hours		<b>3</b>

Minimum Required Grade: C-

## Teaching French Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching French Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		6

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach French, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## German B.A.

### Bachelor of Arts - German

#### College of Humanities & Sciences

**Degree Specific Credits:** 43

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Students are required to maintain a minimum overall GPA of 2.5 in all upper-division GRMN courses presented in fulfillment of requirements for the German major.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Language Core and Introduction to German Culture	19
Upper-Division Core Courses	12
German Culture, Film, and Literature Electives	9
Teaching German Track	
Total Hours	40

### Language Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRMN 106H	Introduction to German Culture	3
GRMN 101	Elementary German I	4
GRMN 102	Elementary German II	4
GRMN 201	Intermediate German I	4
GRMN 202	Intermediate German II	4
Total Hours		19

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Must complete all of the following subcategories. 21-22 total credits required.

### Subcategory 1

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRMN 301	Studies in German Language, Media, and Culture I	3
GRMN 302	Studies in German Language, Media, and Culture II	3
GRMN 311	Introduction to German Literature	3
Total Hours		9

Minimum Required Grade: C-

### Subcategory 2



CODE	TITLE	HOURS
<b>Complete 1 of the following courses:</b>		3
GRMN 441	19th Century German Literature	
GRMN 451	20th and 21st Century German Literature	
GRMN 491	Special Topics	
Total Hours		3

Minimum Required Grade: C-

## German Culture, Film, and Literature Electives

**Rule:** May substitute a 400-level course with consent of instructor

**Note:** The upper-division writing expectation must be met by successfully completing either GRMN 351H or GRMN 352H.

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
GRMN 322L	Survey of German Cinema	
GRMN 340L	Nature and the Environment in German Literature and Film	
GRMN 350	German Culture & Civilization	
GRMN 351H	German Culture: Beginnings to Romanticism	
GRMN 352H	Germ Culture: Romanticism to the Present	
Total Hours		9

Minimum Required Grade: C-

## Teaching German Track

**Notes:**

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning.

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Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.

- Secondary Education Licensure Program
- Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- German qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in German. Students are encouraged to complete the requirements for a second teaching endorsement in another field in more demand in high schools.
- Study in a German language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

### Teaching German Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		6

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach German, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# German Minor

## Minor - German

College of Humanities & Sciences

**Degree Specific Credits:** 31-32

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Language Core	16
Upper-Division Core Courses	12-13
German Culture, Film, and Literature Electives	3
Teaching German Track	
Total Hours	31-32

### Language Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRMN 101	Elementary German I	4
GRMN 102	Elementary German II	4
GRMN 201	Intermediate German I	4
GRMN 202	Intermediate German II	4
Total Hours		16

Minimum Required Grade: C-

### Upper-Division Core Courses

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**Rule:** Complete all of the following subcategories. 12-13 total credits required.

**Note:** Native or near-native speakers of German must substitute two 400-level literature courses for GRMN 301 and GRMN 302.

### Subcategory 1

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRMN 301	Studies in German Language, Media, and Culture I	3
GRMN 311	Introduction to German Literature	3
Total Hours		6

Minimum Required Grade: C-

### Subcategory 2

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
GRMN 302	Studies in German Language, Media, and Culture II	3-4
or GRMN 305	Practicum in German Language	
Total Hours		3-4

Minimum Required Grade: C-

### Subcategory 3

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GRMN 312	Introduction to German Literature: Drama/Poetry	3
Total Hours		3

Minimum Required Grade: C-

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## German Culture, Film, and Literature Electives

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
GRMN 322L	Survey of German Cinema	
GRMN 340L	Nature and the Environment in German Literature and Film	
GRMN 350	German Culture & Civilization	
GRMN 351H	German Culture: Beginnings to Romanticism	
GRMN 352H	Germ Culture: Romanticism to the Present	
Total Hours		3

Minimum Required Grade: C-

## Teaching German Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching German Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		6

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach German, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Greek Minor

## Minor - Greek

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Lower-Division Required Courses	12
Upper-Division Required Courses	9
Total Hours	21

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GRK 101	Elementary Greek I	3
GRK 102	Elementary Greek II	3
GRK 201	Intermediate Greek I	3
GRK 202	Intermediate Greek II	3
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 9 credits from the following courses:</b>		<b>9</b>
GRK 300	Major Greek Writers	
GRK 391	Special Topics	
GRK 392	Independent Study	
GRK 492	Independent Study	
Total Hours		9

Minimum Required Grade: C-



# Japanese B.A.

## Bachelor of Arts - Japanese

### College of Humanities & Sciences

**Degree Specific Credits:** 50

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Students are required to maintain a minimum GPA of 2.5 in all their upper-division JPNS courses presented in fulfillment of requirements for the Japanese major. All other courses taken to satisfy the requirements of the major or minor must be completed with a grade of C- or better; the minimum GPA required is 2.00 in all lower-division work attempted in the major.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

Lower-Division Core Courses	26
Language Core	
Culture and Civilization Core	
East Asian Studies	
Upper-Division Core Courses	12
Major Electives	12
Total Hours	50

## Lower-Division Core Courses

**Rule:** Complete the following subcategories. 29 total credits required.

### Language Core

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JPNS 101	Elementary Japanese I	5
JPNS 102	Elementary Japanese II	5
JPNS 201	Intermediate Japanese I	5
JPNS 202	Intermediate Japanese II	5
Total Hours		20

Minimum Required Grade: C-

**Culture and Civilization Core**

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
JPNS 150H	Japanese Cult & Civiliz	3
Total Hours		3

Minimum Required Grade: C-

**East Asian Studies**

CODE	TITLE	HOURS
<b>Complete at least 1 East Asian studies or history course on Japan or East Asia at any level that are not taught in the Modern and Classical Languages and Literature department for a total of 6 additional credits.</b>		3
CHIN 313L	Chinese Poetry in Translation	
CHIN 380	Chinese Folktales	
GH 161L	Asian Humanities	
PSCI 311	Rev & Reform Modern China	
PSCI 420	Exp Offering: Comp Politics	
RLST 232	Buddhism	
RLST 238H	Japanese Religions	
RLST 354	Topics in East Asia Religions	
Total Hours		3

## Upper-Division Core Courses

**Note:** Either JPNS 412 or JPNS 415 may be taken to complete the 14 credits. JPNS 411 is repeatable once.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JPNS 301	Advanced Japanese	3
JPNS 302	Advanced Japanese	3
JPNS 411	Mod Jpns Wrtrs/Thinkers (repeatable once)	3
JPNS 412	Intro Classical Japanese	3
or JPNS 415	Adv Jpns for Professionals	
Total Hours		12

Minimum Required Grade: C-

## Major Electives

**Notes:**

- JPNS 392 may be taken for up to 3 credits only.
- Only 3 credits from JPNS 390 or JPNS 392 may count towards the 9 credits.
- JPNS 391 may only be counted as an elective when the course is a Japanese literature, Japanese pedagogy/linguistics, or Japanese cultural course not part of basic Japanese language instruction.

CODE	TITLE	HOURS
<b>Complete 12 credits from the following courses:</b>		12
JPNS 311	Jpns Clasc Lit Engl Trans	
JPNS 312	Jpns Lit Medieval to Mod	
JPNS 371	Japanese Film and Anime	
JPNS 390	Research	
JPNS 391	Special Topics	
JPNS 392	Independent Study	
JPNS 431	Post-War Japanese Lit	
JPNS 491	Special Topics	
JPNS 492	Independent Study	
Total Hours		12

Minimum Required Grade: C-

# Japanese Minor

## Minor - Japanese

College of Humanities & Sciences

**Degree Specific Credits:** 32

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## Summary

Lower-Division Core Courses	23
Upper-Division Elective Courses	9
Total Hours	32

## Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
JPNS 101	Elementary Japanese I	5
JPNS 102	Elementary Japanese II	5
JPNS 150H	Japanese Cult & Civiliz	3
JPNS 201	Intermediate Japanese I	5
JPNS 202	Intermediate Japanese II	5
Total Hours		23

Minimum Required Grade: C-

## Upper-Division Elective Courses

**Note:**

## University Of Montana

- JPNS 392 may be taken for up to 3 credits only.
- Only 3 credits from JPNS 390 or JPNS 392 may count toward the 9 credits.
- If offered, JPNS 191, JPNS 291 or UD language courses such as JPNS 301 and/or JPNS 302 may be taken in place of up to 2 of the below electives.
- Also permitted in substitution would be 1 course from outside the department if it has a substantial East Asia-related element.

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
JPNS 311	Jpns Clasc Lit Engl Trans	
JPNS 312	Jpns Lit Medieval to Mod	
JPNS 371	Japanese Film and Anime	
JPNS 390	Research	
JPNS 391	Special Topics	
JPNS 392	Independent Study	
JPNS 411	Mod Jpns Wrtrs/Thinkers	
JPNS 412	Intro Classical Japanese	
JPNS 431	Post-War Japanese Lit	
JPNS 491	Special Topics	
Total Hours		9

Minimum Required Grade: C-

# Latin American Studies Minor

## Minor - Latin American Studies

College of Humanities & Sciences

**Degree Specific Credits:** 30

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Courses	15
Upper-Division Electives	15
Total Hours	30

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 103H	Intro Latin American Studies	3
SPNS 101	Elementary Spanish I	4
SPNS 102	Elementary Spanish II	4
SPNS 201	Intermediate Spanish I	4
Total Hours		15

Minimum Required Grade: C-

### Upper-Division Electives

University Of Montana

CODE	TITLE	HOURS
<b>Complete 15 credits from the following courses:</b>		15
ANTY 354H	Mesoamerican Prehistory	
ARTH 433	Ancient American Art	
ARTH 434	Latin American Art	
ARTH 494	Sem Art Hist & Crit	
ENST 493	Study Abroad: Environmental Justice Latin America	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 334	Latin America: Reform & Revolution	
HSTR 335	Latin America: Workers & Labor	
HSTR 435	Lat Am Human Rgts & Memory	
HSTR 437	US-Latin America Relations	
MCLG 358	Lat Amer Civ Thru Lit/Film	
PSCI 325	Politics of Latin America	
PSCI 327	Politics of Mexico	
PSCI 463	Development Administration	
S W 323	Women & Soc Action Amer	
SPNS 331	Cultures and Societies of Latin America	
SPNS 432	Latin American Literature	
SPNS 494	Seminar	
Total Hours		15

Minimum Required Grade: C-



# Latin Minor

## Minor - Latin

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Course List		
CODE	TITLE	HOURS
Lower-Division Required Courses		12
Upper-Division Required Courses		9
Teaching Latin Track		
Total Hours		21

### Lower-Division Required Courses

Course List		
CODE	TITLE	HOURS
Complete all of the following courses:		
LATN 101	Elementary Latin I	3
LATN 102	Elementary Latin II	3
LATN 201	Intermediate Latin I	3
LATN 202	Intermediate Latin II	3
Total Hours		12

Minimum Required Grade: C-

## Upper-Division Required Courses

Course List		
CODE	TITLE	HOURS
Complete 9 credits from the following courses:		9
LATN 311	Major Latin Authors	
LATN 391	Special Topics	
LATN 392	Independent Study	
LATN 492	Independent Study	
Total Hours		9

Minimum Required Grade: C-

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## Teaching Latin Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### *Teaching Latin Track Requirements*

## University Of Montana

Course List		
CODE	TITLE	HOURS
Complete the following course:		
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		3

Minimum Required Grade: C-

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### Secondary Teaching Licensure

**Note:** For endorsement to teach Latin, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Russian B.A.

### Bachelor of Arts - Russian

#### College of Humanities & Sciences

**Degree Specific Credits:** 43

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Students are required to maintain a minimum overall GPA of 2.5 in all upper-division courses presented in fulfillment of requirements for the Russian major. Must complete a minimum of 27 upper-division credits in Russian courses and electives.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

CODE	TITLE	HOURS
Lower-Division Core Courses		19
Language		
Culture		
Upper-Division Core Courses		24
Expression		
Translation		
Language		
History		
Teaching Russian Track		
Total Hours		43

## Lower-Division Core Courses

**Rule:** Complete the following subcategories of courses. 21 total credits required.

### Language

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
RUSS 101	Elementary Russian I	4
RUSS 102	Elementary Russian II	4
RUSS 201	Intermediate Russian I	4
RUSS 202	Intermediate Russian II	4
Total Hours		16

Minimum Required Grade: C-

### Culture

CODE	TITLE	HOURS
<b>Complete the following course</b>		
RUSS 105Y	Intro to Russian Culture	3
Total Hours		3

Minimum Required Grade: C-

## Upper-Division Core Courses

**Rule:** Complete the following subcategories. 24 total credits required.

**Note:** Student must complete at least 24 credits of upper-division work in Russian courses and electives, 12 credits of which must be in the target language.

### Translation

**Note:** RUSS 494 must be taken for 3 credits and will fulfill the upper division writing requirement.

University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
RUSS 494	Seminar in Russian Studies	3
<b>Complete two of the following courses:</b>		6
FILM 308	Russian Cinema and Culture	
RUSS 306L	Evil and the Supernatural in Russian Literature	
RUSS 307L	Beauty, Power and Pride in Russian Literature	
Total Hours		9

Minimum Required Grade: C-

**Language**

CODE	TITLE	HOURS
Complete four of the following courses:		12
RUSS 301	Russian: Oral & Written Expr. I	
RUSS 302	Russian: Oral & Written Expr. II	
RUSS 411	19th-Century Russian Authors	
RUSS 412	20th-Century Russian Authors	
RUSS 424	Russian Short Story	
RUSS 440	Russian Poetry	
Total Hours		12

Minimum Required Grade: C-

**History**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
Total Hours		3

Minimum Required Grade: C-

## Teaching Russian Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

### Teaching Russian Track Requirement

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		3

Minimum Required Grade: C-

## Secondary Teaching Licensure

## University Of Montana

**Note:** For endorsement to teach Russian, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.



# Russian Minor

## Minor - Russian

College of Humanities & Sciences

**Degree Specific Credits:** 28

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Requirements	16
Upper-Division Credits	12
Teaching Russian Track	
Total Hours	28

### Lower-Division Core Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
RUSS 101	Elementary Russian I	4
RUSS 102	Elementary Russian II	4
RUSS 201	Intermediate Russian I	4
RUSS 202	Intermediate Russian II	4
Total Hours		16

Minimum Required Grade: C -

### Upper-Division Credits

CODE	TITLE	HOURS
<b>Complete 12 upper-division credits in Russian-related courses taught by MCLL faculty or equivalent.</b>		12

Minimum Required Grade: C-

## Teaching Russian Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Russian Track Requirement

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
MCLG 410	Methods Teaching Foreign Language	3
Total Hours		3

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach Russian, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Russian Studies Minor

## Minor - Russian Studies

College of Humanities & Sciences

**Degree Specific Credits:** 28

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Lower-Division Core Courses	19
Language	
Culture	
Minor Electives	9
History	
Russian Electives	
Total Hours	28

### Lower Division Core Courses

**Rule:** Must complete the following subcategories. 19 total credits required.

#### Language

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
RUSS 101	Elementary Russian I	4
RUSS 102	Elementary Russian II	4
RUSS 201	Intermediate Russian I	4
RUSS 202	Intermediate Russian II	4
Total Hours		16

Minimum Required Grade: C-

### Culture

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
RUSS 105H	Intro to Russian Culture	3
Total Hours		3

Minimum Required Grade: C-

## Minor Electives

**Rule:** Complete the following subcategories. 9 total credits required.

### History

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
Total Hours		3

Minimum Required Grade: C-

### Russian Electives

University Of Montana

		Course List
CODE	TITLE	HOURS
<b>Must complete 6 credits of upper-division coursework. 3 of the 6 credits must be taken in the MCLL department and 3 from another department/discipline besides History. Speak with your minor advisor about which courses will fulfill this requirement.</b>		6
Total Hours		6

Minimum Required Grade: C-

## Spanish B.A.

### Bachelor of Arts - Spanish

#### College of Humanities & Sciences

**Degree Specific Credits:** 46

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Students are required to maintain a minimum overall GPA of 2.5 in all upper-division courses presented in fulfillment of requirements for the Spanish major.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Core Courses	16
Upper-Division Core Courses	12
Additional Upper-Division Spanish Electives	18
Teaching Spanish Track	
Total Hours	46

### Lower-Division Core Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SPNS 101	Elementary Spanish I	4
SPNS 102	Elementary Spanish II	4
SPNS 201	Intermediate Spanish I	4
SPNS 202	Intermediate Spanish II	4
Total Hours		16

Minimum Required Grade: C-

## Upper-Division Core Courses

**Note:** SPNS 301 may be taken concurrently with any other 300-level Spanish course

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SPNS 301	Spanish: Oral and Written Expr	3
SPNS 315	Major Authors	3
SPNS 499	Capstone	3
WLC 391	Special Topics in World Languages and Cultures	3
Total Hours		12

Minimum Required Grade: C-

## Additional Upper-Division Spanish Electives

**Note:** 6 credits need to be 400 level content courses: SPNS 400, SPNS 432, SPNS 465, SPNS 466, SPNS 491, SPNS 492 or SPNS 494. The remaining 12 credits could be completed by taking any combination of the upper-division elective courses.

CODE	TITLE	HOURS
	<b>Complete 18 credits of upper-division courses in Spanish.</b>	18
Total Hours		18

Minimum Required Grade: C-

## Teaching Spanish Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Spanish qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in Spanish. Students are encouraged to complete the requirements for a second teaching endorsement in another field in more demand in high schools.
- Study in a Spanish language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

### Teaching Spanish Track Requirements



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
SPNS 305	Spanish Phonetics	3
SPNS 400	Introduction to Spanish Linguistics	3
SPNS 408	Spanish: Adv Comp & Conversat	3
Total Hours		15

Minimum Required Grade: C-

## Secondary Teaching Licensure

**Note:** For endorsement to teach Spanish, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Spanish Minor

## Minor - Spanish

College of Humanities & Sciences

**Degree Specific Credits:** 34

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Lower-Division Core	16
Upper-Division Core	6
Expression	
Literature	
Upper-Division Electives	12
Literature and Linguistics	
Additional Electives	
Teaching Spanish Track	
Total Hours	34

### Lower-Division Core

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
SPNS 101	Elementary Spanish I	4
SPNS 102	Elementary Spanish II	4
SPNS 201	Intermediate Spanish I	4
SPNS 202	Intermediate Spanish II	4
Total Hours		16

Minimum Required Grade: C-

## Upper-Division Core

**Rule:** Must complete all of the following subcategories. 6 total credits required.

### Expression

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
SPNS 301	Spanish: Oral and Written Expr	3
Total Hours		3

Minimum Required Grade: C-

### Literature

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
SPNS 326	Contemporary Spanish Lit	3
or SPNS 331	Cultures and Societies of Latin America	
Total Hours		3

Minimum Required Grade: C-

## Upper Division Electives

## University Of Montana

**Rule:** Complete the following subcategories. 12 total credits required.

### Literature and Linguistics

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
SPNS 400	Introduction to Spanish Linguistics	
SPNS 432	Latin American Literature	
SPNS 465	Spanish Lit:Renaiss/Goldn Age	
SPNS 466	Spanish Lit:Modern & Contemp	
SPNS 494	Seminar	
Total Hours		3

Minimum Required Grade: C-

### Additional Electives

CODE	TITLE	HOURS
<b>Complete 9 credits of additional upper-division SPNS electives.</b>		9
Total Hours		9

Minimum Required Grade: C-

## Teaching Spanish Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.

## University Of Montana

- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.
- Study in a Spanish-language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

### Teaching Spanish Track Requirements

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 270S	Intro to Linguistics	3
MCLG 410	Methods Teaching Foreign Language	3
SPNS 305	Spanish Phonetics	3
SPNS 400	Introduction to Spanish Linguistics	3
Total Hours		12

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For endorsement to teach Spanish, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# World Languages and Cultures B.A.

## Bachelor of Arts - World Languages and Cultures

College of Humanities & Sciences

**Degree Specific Credits:** 51-59

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Language Requirement		12-20
Lower-Division Cultures Requirement		12
Upper-Division Electives		27
Total Hours		51-59

### Lower-Division Language Requirement

**Rule:** Complete two years in a single language: Arabic, Chinese, French, German, Greek, Japanese, Latin, Spanish, or Russian.

CODE	TITLE	HOURS
<b>Complete one of the following sequences:</b>		
<b>Arabic:</b>		16
ARAB 101	Elementary Modern Standard Arabic I	
ARAB 102	Elementary Modern Standard Arabic II	
ARAB 201	Intermediate Modern Standard Arabic I	

University Of Montana

ARAB 202	Intermediate Modern Standard Arabic II	
<b>Chinese:</b>		20
CHIN 101	Elementary Chinese I	
CHIN 102	Elementary Chinese II	
CHIN 201	Intermediate Chinese I	
CHIN 202	Intermediate Chinese II	
<b>French:</b>		16
FRCH 101	Elementary French I	
FRCH 102	Elementary French II	
FRCH 201	Intermediate French I	
FRCH 202	Intermediate French II	
<b>Greek:</b>		12
GRK 101	Elementary Greek I	
GRK 102	Elementary Greek II	
GRK 201	Intermediate Greek I	
GRK 202	Intermediate Greek II	
<b>German:</b>		16
GRMN 101	Elementary German I	
GRMN 102	Elementary German II	
GRMN 201	Intermediate German I	
GRMN 202	Intermediate German II	
<b>Japanese:</b>		20
JPNS 101	Elementary Japanese I	
JPNS 102	Elementary Japanese II	

JPNS 201	Intermediate Japanese I	
JPNS 202	Intermediate Japanese II	
<b>Latin:</b>		12
LATN 101	Elementary Latin I	
LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
<b>Russian:</b>		16
RUSS 101	Elementary Russian I	
RUSS 102	Elementary Russian II	
RUSS 201	Intermediate Russian I	
RUSS 202	Intermediate Russian II	
<b>Spanish:</b>		16
SPNS 101	Elementary Spanish I	
SPNS 102	Elementary Spanish II	
SPNS 201	Intermediate Spanish I	
SPNS 202	Intermediate Spanish II	
Total Credits		12-20

Minimum Required Grade: C-

## Lower-Division Cultures Requirement

**Rule:** Complete four courses from the following list of Languages and Culture Courses.



CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
ANTY 102H	Intro to South & S. East Asia	
ANTY 103H	Intro to Latin American Studies	
ANTY 133X	Food and Culture	
ANTY 141H	The Silk Road	
ANTY 220S	Culture & Society	
ANTY 241H	Central Asian Culture and Civilization	
CLAS 160L	Classical Mythology	
CLAS 180H	Environment & Nature in the Classical World	
CLAS 251L	The Epic	
CLAS 252L	Greek Drama: Politics on Stage	
GLBD 191	Special Topics	
GRMN 106H	Introduction to German Culture and Civilization	
JPNS 150H	Japanese Culture & Civilization	
RUSS 105Y	Intro to Russian Culture	
SSEA 202X	Introduction to India	
SSEA 234X	Hindu Religious Traditions	
Total Credits		12

Minimum Required Grade: C-

### Upper-Division Electives

CODE	TITLE	HOURS
<b>Complete 27 credits of the following courses:</b>		27

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ARAB 305	The Arab World	
CHIN 301	Advanced Chinese I	
CHIN 302	Advanced Chinese II	
CHIN 313L	Chinese Poetry in Translation	
CHIN 314L	Traditional Chinese Literature	
CHIN 380	Chinese Folktales	
CHIN 388	Readings in Classical Chinese	
CLAS 320	Women in Antiquity	
CLAS 360H	Ancient Greek Civ and Culture	
CLAS 365E	The Roots of Western Ethics	
FRCH 300	Intro to Literature in French	
FRCH 301	Advanced French Grammar and Oral Expression	
FRCH 302	Advanced French Grammar and Oral Expression II	
FRCH 310	Fr. Lit. Cult. Mid. Age Renass	
FRCH 311	Fr. Lit. Cult. 17th 18th Cent.	
FRCH 312	Fr. Lit. Cult. Long 19th Cent.	
FRCH 313	Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century	
FRCH 338	The French Cinema	
FRCH 339	Surv African Cinema	
FRCH 350	French Civ & Culture	
FRCH 420	Studies in French Prose	
FRCH 430	Studies in French Drama	
FRCH 440	Studies in French Poetry	

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GRK 300	Major Greek Writers	
GRMN 301	Studies in German Language, Media, and Culture I	
GRMN 302	Studies in German Language, Media, and Culture II	
GRMN 305	Practicum in German Language	
GRMN 311	Introduction to German Literature	
GRMN 312	Introduction to German Literature: Drama/Poetry	
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
GRMN 322L	Survey of German Cinema	
GRMN 340L	Nature and the Environment in German Literature and Film	
GRMN 350	German Culture & Civilization	
GRMN 351H	German Culture: Beginnings to Romanticism	
GRMN 352H	Germ Culture: Romanticism to the Present	
GRMN 431	German Literature 1760-1832	
GRMN 441	19th Century German Literature	
GRMN 451	20th and 21st Century German Literature	
GRMN 494	Seminar in German Studies	
HSTR 302H	Ancient Greece	
HSTR 304H	Ancient Rome	
IRSH 345L	Literature in the Irish Language	
IRSH 350	The Literature of Pre-Norman Ireland	
IRSH 355	The Politics of Culture: Irish America, the Gaelic Revival, and the Easter Rising	
IRSH 360	Irish/N Irish Literature	

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IRSH 365	Ireland and America in the Age of Enlightenment and Revolution	
IRSH 370	The Irish Conflict: 1968-1998	
IRSH 375	The Irish and their Language	
IRSH 380	Topics in Irish Studies	
IRSH 381	Contemporary Irish Women's Writing	
IRSH 382	Rockin' Rebels: Popular Irish Music from Traditional to Punk	
JPNS 301	Advanced Japanese I	
JPNS 302	Advanced Japanese II	
JPNS 306	Japanese for Business/Tour	
JPNS 312	Jpns Lit Medieval to Mod	
JPNS 371	Japanese Film and Anime	
JPNS 411	Mod Jpns Wrtrs/Thinkers	
JPNS 415	Adv Jpns for Professionals	
JPNS 431	Post-War Japanese Lit	
LATN 311	Major Latin Authors	
MCLG 300	Language in the Real World: Introduction to Applied Linguistics	
MCLG 315	Major Hispanic Authors	
MCLG 410	Methods Teaching Foreign Language	
RUSS 301	Russian: Oral & Written Expr I	
RUSS 302	Russian: Oral and Writen Expr II	
RUSS 306L	Evil and the Supernatural in Russian Literature	
RUSS 307L	Beauty, Power and Pride in Russian Literature	
RUSS 411	19th-Century Russian Authors	

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RUSS 412	20th-Century Russian Authors	
RUSS 424	Russian Short Story	
RUSS 440	Russian Poetry	
RUSS 494	Seminar in Russian Studies	
SSEA 342	Topics Comparative Lit & Rel	
SSEA 368	Contemporary Buddhism in SSEA	
SPNS 301	Spanish: Oral and Written Expr	
SPNS 302	Spanish in Oral and Written Expression II	
SPNS 305	Spanish Phonetics	
SPNS 306	Commercial Spanish	
SPNS 308	Intensive Spanish Abroad	
SPNS 321	Advanced Conversations	
SPNS 326	Contemporary Spanish Lit.	
SPNS 331	Cultures and Societies of Latin America	
SPNS 355	Topics in Spanish Lit/Culture	
SPNS 400	Introduction to Spanish Linguistics	
SPNS 408	Spanish: Adv Comp & Conversat	
SPNS 432	Latin American Literature	
SPNS 465	Spanish Lit:Renaiss/Goldn Age	
SPNS 466	Spanish Lit:Modern & Contemp	
Total Credits		27

Minimum Required Grade: C-

# English in Academic Strength and Leadership (EASL) Certificate

## Post-secondary Certificate - English in Academic Strength and Leadership

### College of Humanities & Sciences

The English in Academic Strength and Leadership (EASL) Certificate is eligible for non-native English speaking students at UM.

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	12
Total Hours	12

### Required Courses

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
EASL 250	Intermediate English for Academic Purposes I: Written Production	3
EASL 251	Intermediate English for Academic Purposes II: Spoken Production	3
EASL 450	Advanced English for Academic Purposes I: Written Production	3
EASL 451	Advanced English for Academic Purposes II: Spoken Production	3
WRIT 101	College Writing I	3
Total Hours		12

Minimum Required Grade: C-

## World Competencies Certificate

The Certificate in World Competencies will encourage students to be more informed about regions around the world. It will also hone their analytic, as well linguistic skills.

### Post-Secondary Certificate - World Competencies

#### College of Humanities & Sciences

**Degree Specific Credits:** 22-26, depending on the choice of language

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** A programmatic international experience, for example, study abroad, can be applied to these requirements.

#### Summary

Language Requirement	16-20
Cultural Studies Requirement	3
Global/Regional Issues Requirement	3
Activities Requirement (see requirement below)	0
Total Hours	22-26

#### Language Requirement

CODE	TITLE	HOURS
<b>Complete four semesters of one of the following languages:</b>		16-20
<b>Arabic</b>		
ARAB 101	Elementary Modern Standard Arabic I	
ARAB 102	Elementary Modern Standard Arabic II	

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ARAB 201	Intermediate Modern Standard Arabic I	
ARAB 202	Intermediate Modern Standard Arabic II	
<b>Chinese</b>		
CHIN 101	Elementary Chinese I	
CHIN 102	Elementary Chinese II	
CHIN 201	Intermediate Chinese I	
CHIN 202	Intermediate Chinese II	
<b>French</b>		
FRCH 101	Elementary French I	
FRCH 102	Elementary French II	
FRCH 201	Intermediate French I	
FRCH 202	Intermediate French II	
<b>German</b>		
GRMN 101	Elementary German I	
GRMN 102	Elementary German II	
GRMN 201	Intermediate German I	
GRMN 202	Intermediate German II	
<b>Japanese</b>		
JPNS 101	Elementary Japanese I	
JPNS 102	Elementary Japanese II	
JPNS 201	Intermediate Japanese I	
JPNS 202	Intermediate Japanese II	
<b>Latin</b>		
LATN 101	Elementary Latin I	



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LATN 102	Elementary Latin II	
LATN 201	Intermediate Latin I	
LATN 202	Intermediate Latin II	
<b>Russian</b>		
RUSS 101	Elementary Russian I	
RUSS 102	Elementary Russian II	
RUSS 201	Intermediate Russian I	
RUSS 202	Intermediate Russian II	
<b>Spanish</b>		
SPNS 101	Elementary Spanish I	
SPNS 102	Elementary Spanish II	
SPNS 201	Intermediate Spanish I	
SPNS 202	Intermediate Spanish II	
Total Hours		16-20

Minimum Required Grade: C-

## Cultural Studies Requirement

**Note:** The course meeting this requirement should be in the language or the area of expertise, taught either in English or the target language.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
<b>Arabic Studies</b>		
ARAB 305	The Arab World	
<b>Chinese Studies</b>		

CHIN 313L	Chinese Poetry in Translation	
CHIN 380	Chinese Folktales	
<b>French Studies</b>		
FRCH 300	Intro to Literature in French	
FRCH 310	Fr. Lit. Cult. Mid. Age Renass	
FRCH 311	Fr. Lit. Cult. 17th 18th Cent.	
FRCH 312	Fr. Lit. Cult. Long 19th Cent.	
FRCH 313	Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century	
FRCH 338	The French Cinema	
FRCH 339	Surv African Cinema	
FRCH 420	Studies in French Prose	
FRCH 430	Studies in French Drama	
FRCH 440	Studies in French Poetry	
<b>German Studies</b>		
GRMN 106H	Introduction to German Culture and Civilization	
GRMN 311	Introduction to German Literature	
GRMN 317L	Introduction to Multicultural Literature in Contemporary Germany	
GRMN 322L	Survey of German Cinema	

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GRMN 340L	Nature and the Environment in German Literature and Film	
GRMN 350	German Culture & Civilization	
GRMN 351H	German Culture: Beginnings to Romanticism	
GRMN 352H	Germ Culture: Romanticism to the Present	
GRMN 431	German Literature 1760-1832	
GRMN 441	19th Century German Literature	
GRMN 451	20th and 21st Century German Literature	
<b>Japanese Studies</b>		
JPNS 301	Advanced Japanese	
JPNS 302	Advanced Japanese	
JPNS 311	Jpns Clasc Lit Engl Trans	
JPNS 312	Jpns Lit Medieval to Mod	
JPNS 371	Japanese Film and Anime	
JPNS 411	Mod Jpns Wrtrs/Thinkers	
JPNS 412	Intro Classical Japanese	
JPNS 415	Adv Jpns for Professionals	
JPNS 431	Post-War Japanese Lit	
<b>Latin/Classical Studies</b>		
CLAS 160L	Classical Mythology	

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CLAS 251L	The Epic	
CLAS 252L	Greek Drama: Politics on Stage	
HSTR 302H	Ancient Greece	
HSTR 304H	Ancient Rome	
<b>Russian Studies</b>		
FILM 308	Russian Cinema and Culture	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
RUSS 105H	Intro to Russian Culture	
RUSS 306L	Evil and the Supernatural in Russian Literature	
RUSS 307L	Beauty, Power and Pride in Russian Literature	
RUSS 411	19th-Century Russian Authors	
RUSS 412	20th-Century Russian Authors	
RUSS 424	Russian Short Story	
RUSS 440	Russian Poetry	
<b>Spanish/Latin American Studies</b>		
MCLG 315	Major Hispanic Authors	
SPNS 301	Spanish: Oral and Written Expr	
SPNS 326	Contemporary Spanish Lit	
SPNS 331	Cultures and Societies of Latin America	

Total Hours	3
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Minimum Required Grade: C-

## Global/Regional Issues Requirement

**Note:** Other courses may fulfill this requirement at the discretion of the certificate advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ANTY 102H	Intro to South & S. East Asia	
ANTY 141H	The Silk Road	
ANTY 241H	Central Asian Culture and Civ	
ANTY 250S	Intro to Archaeology	
ANTY 251	Foundations of Civilization	
ANTY 254X	Arch Wonders of the World	
ANTY 330X	Peoples and Cultures of World	
ARTH 200H	Art of World Civilization I	
ARTH 201H	Art of World Civilization II	
BGEN 360	International Business	
ENST 230H	Nature and Society	
GPHY 121S	Human Geography	
GPHY 141S	Geography of World Regions	
GPHY 245	The Middle East	
GPHY 347	Regional Geography (Multiple Regions)	
GBLD 194	Seminar	
GBLD 294	Seminar	
HSTR 101H	Western Civilization I	

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HSTR 102H	Western Civilization II	
HSTR 103H	Honors Western Civilization I	
HSTR 104H	Honors Western Civilization II	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240H	East Asian Civilizations	
HSTR 241H	Central Asian Cult & Civ	
HSTR 262H	Islamic Civil: Classical Age	
HSTR 264H	Islamic Civ: Modrn Era	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 334	Latin America: Reform & Revolution	
HSTR 345H	Modern China	
HSTR 368	Iran Between Two Revolutions	
HSTR 386	Nationalism Modern Middle East	
IRSH 249	The Irish	
IRSH 345L	Literature in the Irish Lang	
IRSH 360	Irish/N Irish Literature	
LIT 349L	Medieval Lit	
LIT 350L	Chaucer	
LIT 353L	Milton	
LIT 355	British Romanticism	
PSCI 220S	Intro to Comparative Government	
PSCI 230X	Intro to International Relations	
PSCI 311	Rev & Reform Modern China	

PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 334	International Security	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 381	State Formation	
SOCI 212S	Social Issues Southeast Asia	
SOCI 325	Social Stratification	
SOCI 355	Population and Society	
Total Hours		3

Minimum Required Grade: C-

### Activities Requirement

**Note:** Students are required to retain documentation tracking participation/attendance of such activities, which will be signed by the WLC chair.

CODE	TITLE	HOURS
	<b>Participation in eight (8) campus activities with an international focus (these activities are not for credit). Examples of such activities could include participating club events; attending campus lectures that have an international focus; volunteering for Foreign Language Day; or going to cultural events (art exhibit, theater performance) that have an international theme.</b>	

# Davidson Honors College

## Timothy Nichols, Dean

The mission of the **Davidson Honors College** is to attract the best students from around our state and country to the University of Montana; to develop engaged citizens and professionals who excel in critical thinking, communication, collaboration, problem solving, ethical reasoning, and civic engagement; and to serve as a hub of intellectual, service, and social activity for students, staff, and faculty across the University of Montana campus. The mission of the Davidson Honors College is to attract the best students from around our state and country to the University of Montana; to develop engaged citizens and professionals who excel in critical thinking, communication, collaboration, problem solving, ethical reasoning, and civic engagement; and to serve as a hub of intellectual, service, and social activity for students, staff, and faculty across the University of Montana campus.

## Curriculum

In accordance with our mission, the DHC is committed to offering students the additional resources, challenges, and encouragement to be active and collaborative learners. DHC students are expected to:

- be intellectually curious;
- develop skills in critical thinking, analytic reasoning, and problem solving;
- increase their abilities to write and speak effectively;
- acquire skills and habits of community and public service;
- develop research and life-long learning skills and habits.

Honors students are expected to pursue these student learning outcomes inside the classroom and out, in their work and their recreation, volunteer service, membership in clubs and organizations, participation in campus and civic governance, independent study, pursuit of their hobbies and interests, and formal course work.

Honors courses are limited in enrollment to 20 students and usually are conducted in a discussion or seminar format. They emphasize critical thinking, the development of written and oral communication skills, direct contact with the faculty, and use of original texts or "hands-on," participatory experience. These courses are taught by outstanding faculty selected according to their department's standards of excellence. Course offerings vary somewhat and represent many academic departments and subject areas. Honors courses often fulfill General Education and many common major requirements.

At the junior and senior level students are offered a selection of Honors electives. These electives are open to students from all disciplines. The aim of these courses is to assist students in applying different methods of inquiry and research, in using the insights of various disciplines, in integrating the students' knowledge, and in developing well-informed personal stances toward the material and issues studied.

In their senior year, students complete an Honors thesis or research project, assuming responsibility, together with a faculty mentor, for an original scholarly research or creative project. This project may coincide with a departmental requirement, and is intended to prepare students to fulfill roles of intellectual, moral, and cultural leadership as they realize their places in society.



## Assessment of Personal and Academic Goals

A college education invites students to formulate goals and reflect on their progress toward attaining them. Davidson Honors College students are responsible for evaluating their aims and attainments from year to year in collaboration with an advisor. Entering students are asked to assess their abilities and resources and begin to formulate interests and aims in light of the student learning outcomes mentioned previously.

## Requirements

Davidson Honors College students are required to complete a minimum of seven Honors experiences, including HONR 120 and HONR 121L and a senior Honors capstone project. Details are available in the Davidson Honors College office or on the **DHC web site**.

It also is recommended that all students include in their curriculum at least one course or independent study project that includes an experience of volunteer community service or study abroad.

Graduation through the Davidson Honors College requires a cumulative grade point average of 3.0 or higher, and 3.4 in the major field. Upon successful completion of the requirements, students will receive their bachelor degrees as "University Scholars" in their respective majors and have this distinction noted on their diplomas. Graduation through the Davidson Honors College is not connected with the distinctions "with honors" and "with high honors" bestowed on the recommendation of major departments according to certain grade point averages and/or on the basis of exams or other means of assessment in the senior year.

## Scholarships

The Davidson Honors College administers the Presidential Leadership Scholarships for incoming freshmen, and several other scholarship programs for currently enrolled students. For further information about these scholarship programs, contact the Honors College. Honors students and those transferring from other institutions are eligible for the general scholarship program. For further information, contact the Financial Aid Office.

## Admission to the DHC

Students applying to the Davidson Honors College should show evidence of academic talent and motivation. Generally, a minimum high school GPA of 3.5 is expected, as well as an ACT score of 27 or higher, or SAT combined score of 1260. These criteria are not absolute, and highly motivated students are encouraged to apply.

Applications are particularly welcomed from older or non-traditional students and students from varied racial and ethnic backgrounds. College transfer students with a record of strong academic performance (GPA of 3.5 or higher) also are welcome to apply. *The Davidson Honors College Application* must be postmarked or submitted online by the first Friday in December. Note that all applicants to the Davidson Honors College also must complete a separate application for admission to the University of Montana-Missoula.

## Presidential Leadership Scholarships

## University Of Montana

The Presidential Leadership Scholarships are the University of Montana's premier academic scholarships, recognizing outstanding talent, academic performance, leadership, and contribution to the community. These awards are renewable for four years, subject to satisfactory performance by the student. Each scholarship includes a full or partial tuition waiver, the value of which varies according to the amount of tuition each year.

Eligible candidates for the Presidential Leadership Scholarship must be recent high school graduates who have not previously enrolled as a regular college or university student. Recent finalists for the Presidential Leadership Scholarship posted an average of 3.98 GPA, SAT combined score of 1310, and ACT composite score of 30.

All Davidson Honors College applications for admission received by the first Friday in December of each year will be considered for the Presidential Leadership Scholarship.

Contact:

The Davidson Honors College  
University of Montana  
Missoula, MT 59812  
Phone: **(406) 243-2541**  
e-mail: **dhc@umontana.edu**  
web site: **<http://www.dhc.umt.edu>**

## Franke Global Leadership Initiative

### **Jeanne Loftus, Director**

The Franke Global Leadership Initiative is a certificate program that encourages undergraduate students to lead, innovate and think entrepreneurially in order to propose solutions to some of society's greatest challenges. Each year, a cohort of students from disciplines across campus is selected to participate in this 4-year, 12-credit Certificate in Global Leadership.

Students in the Franke Global Leadership Certificate begin by exploring new and enduring global challenges through small, interdisciplinary seminars and through a survey course that delves into specific challenges within a set of five overarching global themes. After gaining an understanding of global challenges, participants experience different styles of leadership and begin to practice and develop leadership styles of their own.

During the final two years of the certificate, the program hones in on a specific theme and challenge chosen by each student. The world becomes the classroom in year three as students undertake experiential learning in both domestic and international settings. By year four, students are ready to bring their individual experiences together through a culminating capstone project with interdisciplinary teams. Each team presents a problem and proposes an innovative solution formed from their out-of-classroom experiences and disciplinary knowledge.

## Undergraduate Certificates

- Global Leadership Certificate

# Global Leadership Certificate

## Post-Secondary Certificate - Global Leadership

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	6
Required Courses	6
Total Hours	12

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GBLD 110	Global Challenges and Leadership	1
GBLD 194	Seminar	3
GBLD 220	Models of Leadership	2
Total Hours		6

Minimum Required Grade: C-

### Required Courses

**Note:**

- Junior year - Students must complete 3 upper-division credits of internship, research, study abroad or service learning connected to their global theme.
- Senior year - Students must complete 3 credits of GBLD 499 (2 in autumn, 1 in spring).

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
3 upper-division credits of internship, research, study abroad or service learning.		3
GBLD 499	GLI Capstone (Taken in 2 parts)	3
GLI Capstone Development (Sections 01-20) - 2 credits		
GLI Capstone Project (Sections 21-40) - 1 Credit		
Total Hours		6

Minimum Required Grade: C-

## Graduate School

### **Scott Whittenburg - Vice President for Research and Creative Scholarship & Dean of The Graduate School**

Graduate education explores and advances knowledge boundaries and re-defines the state-of-the-art in every discipline. A master's degree will improve a person's expertise in their given field while a doctoral degree will promote original research that advances the current knowledge in the field.

The mission of the Graduate School is to improve and advance graduate education at the University of Montana. Our graduate programs train the next generation of scholars and enable the generation of new knowledge that will contribute to the scientific, economic and cultural needs of the state, the nation and the global community in the 21st century. The Graduate School carries out its mission through student advocacy, promotion of diversity and inclusivity, promotion of research, and development of dynamic, synergistic paths for education.

The Graduate School administers admission to masters and doctoral graduate programs at the University of Montana. Questions about specific programs should be directed to the appropriate college or school. There are currently 83 different graduate programs at the University of Montana that provide curricula for Master's, Educational Specialist, and Doctoral degrees. A complete list of programs is found in the Graduate School webpage and on the Degree and Majors webpage. The Skaggs School of Pharmacy, the School of Physical Therapy and Rehabilitation Science, and the School of Law administer the Professional Doctorates in Pharmacy, Physical Therapy, and Juris Doctor, respectively.

Applicants complete an online application, providing the information required by the graduate program of interest. Official test scores are sent to the Graduate School, while transcripts are sent to the program. Many, but not all, graduate programs have a specific application deadline. Each program has an admissions committee that evaluates the application, and the committee's final decision is forwarded as a recommendation to the Graduate School. The applicant then receives an electronic decision letter from the Graduate School.

Please refer to the graduate school website for degree programs offered. For further questions, please call us at 406-243-2572 or via email at [grad.school@umontana.edu](mailto:grad.school@umontana.edu).

## Climate Change Studies Minor

**Peter McDonough, Coordinator**

Climate Change Studies is an inter-disciplinary program open to all majors. The program educates students in three areas of the climate change issue: science, society, and solutions. Coursework in the minor provides a foundation that enables students to engage the scientific, societal, and political dimensions of global climate change. Further, the focus on solutions with its orientation toward applied learning will help students develop critical thinking and problem solving skills. Participating students will enhance their major field of study. They will be better prepared to enter a broad range of professions and graduate programs where they can meet the emerging challenges and opportunities arising from climate change. Climate Change Studies is a joint program between the W.A Franke College of Forestry and Conservation, College of Arts and Sciences, and Missoula College's Energy Technology program.

### Minor - Climate Change Studies

**Degree Specific Credits: 21**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Required Course	3
Climate Change Science	6
Climate Change and Society	6
Climate Change Solutions	6
Total Hours	21

### Required Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CCS 103X	Intro Climate Change:Sci & Soc	3
Total Hours		3

Minimum Required Grade: C-

## Climate Change Science

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
ERTH 303N	Weather and Climate	
GEO 318	Earth's Changing Climate	
GEO 488	Snow, Ice and Climate Change	
GPHY 525	Advanced Physical Geography	
NRSM 210N	Soils, Water, and Climate	
NRSM 281	Science of Climate Change	
NRSM 408	Global Cycles and Climate	
NRSM 418	Ecosystem Climatology	
Total Hours		6

Minimum Required Grade: C-

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## Climate Change and Society

**Note:** Special topics courses and experimental offerings may apply to this requirement at the direction of the Climate Change Studies program director.



CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
COMX 349	Communication, Consumption, and Climate	
ECNS 445	Int Env Econ & Clim Change	
ENST 367	Environmental Politics & Policies	
ENST 427	Social Issues:The Mekong Delta	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 428	Climate Policy	
PHL 112E	Intro Ethics and Environment	
PHL 323	Ethics of Climate Change	
PUAD 503	Policy Analysis	
Total Hours		6

Minimum Required Grade: C-

## Climate Change Solutions

**Note:** Students must complete one course from each category for a total of 6 credits.

### Category A

CODE	TITLE	HOURS
<b>Complete three credits of the following courses:</b>		3
CCS 391	Climate Change Special Topics	
CCS 395	Climate Change Practicum	
CCS 398	Clmt Change Internship/SERV	
ENST 476	Community Sustainability in Practice	
Total Hours		3

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Minimum Required Grade: C-

**Category B**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete three credits of the following courses:</b>		<b>3</b>
BGEN 160S	Issues in Sustainability	
BGEN 445	Sustainability Reporting	
BMGT 410	Sustainable Business Practices	
CCS 352	Climate Field Studies	
CCS 391	Climate Change Special Topics	
CCS 491	Climate Change Special Topics	
ENST 291	Special Topics/Experimental Courses (Energy and Climate)	
ENST 437	Climate Change: Mekong Delta	
GPHY 421	Sustainable Cities	
NRSM 321	Field Studies: Energy Systems of Montana	
Total Hours		<b>3</b>

Minimum Required Grade: C-

# Global Public Health Minor

## Minor - Global Public Health

College of Humanities & Sciences

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Students must take all core courses from The University of Montana's curriculum, but can receive content credit for relevant practicum and internships experience and for relevant courses taken at other universities if approved by the program director.

## Summary

Required Courses	6
Core Electives	9
Content Electives	6
Total Hours	21

## Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOM 227	Vectors and Parasites	3
PSCI 377	Global Health Issues	3
Total Hours		6

Minimum Required Grade: C-

## Core Electives

## University Of Montana

**Note:** No more than 6 of the required 9 credits can be from any one discipline. Students should select the Ethnobotany of Amerindians section and/or the Public Health Genetics section of PHAR 391

CODE	TITLE	HOURS
<b>Complete 9 credits from the following courses:</b>		9
AHHS 430	Health Aspects of Aging	
ANTY 126	Anthropology and Global Health	
ANTY 349	Social Change	
ANTY 426	Culture, Health and Healing	
BIOM 250N	Microbiology for Hlth Sciences	
BIOM 427	General Parasitology	
BIOM 428	General Parasitology Lab	
BIOM 460	Ecology of Infectious Diseases	
CHTH 355	Theory Practicum Community Health Education	
CHTH 445	Program Planning in Community Health	
COMX 425	Communication in Health Organizations	
ECNS 310	Intro Health Economics	
GPHY 468	Community & Regional Analysis	
IDS 497	Methods	
PHAR 320	Am Ind Health Issues	
PHAR 391	Special Topics (Ethnobotany of Amerindians or Public Health Genetics)	
PHL 321E	Philosophy & Biomedical Ethics	
PSCI 431	Politics of Global Migration	
PSCI 463	Development Administration	
S W 465	Social Work Global Context	
SOCI 355	Population and Society	

## University Of Montana

THTR 385	Theatre for Social Justice	
Total Hours		9

Minimum Required Grade: C-

## Content Electives

CODE	TITLE	HOURS
<b>Complete 6 credits from the following courses:</b>		6
ANTY 333	Culture and Population	
ANTY 391	Special Topics	
ANTY 402	Quan Ethnographic Field Methds	
ANTY 418	Evolution and Genetic Variation in Human Populations	
ANTY 422	Mind, Culture and Society	
ANTY 431	Ethnographic Field Methods	
ANTY 435	Drugs, Culture and Society	
BIOB 130N	Evolution and Society	
BIOH 112	Human Form and Function I	
BIOH 113	Human Form and Function II	
BIOH 462	Principles Medical Physiology	
BIOM 402	Medical Bacteriology & Mycology	
BIOM 435	Virology	
CHTH 414	Health and Culture	
COMX 204X	International and Development Communication	
COMX 415	Intercultural Communication	
COMX 480	Health Communication	
COMX 485	Interaction and Well-being	

ECNS 217	Issues in Economic Development	
GPHY 121S	Human Geography	
GPHY 434	Food and Famine	
HTH 430	Health and Mind/Body/Spirit	
NASX 303E	Ecological Perspectives in Native American Traditions	
NASX 304E	Native American Beliefs/Philos	
NUTR 221N	Basic Human Nutrition	
PSCI 324	Climate Policies: China & U.S.	
PSCI 326	Politics of Africa	
PSCI 348	US Multicultural Politics	
PSCI 448	Health Care Policy	
PSYX 362	Multicultural Psychology	
PUBH 155	Reimagining Global Health	
PUBH 595	Practicum	
S W 300	Hum Behav & Soc Environ	
S W 310	S W Policy & Services	
S W 323	Women & Soc Action Amer	
S W 410E	Social Work Ethics	
S W 455	Social Gerontology	
S W 475	Death, Dying and Grief	
SOCI 332	Sociology of the Family	
SOCI 443	Sociology of Poverty	
SOCI 471	Gender and Global Development	

University Of Montana

WGSS 263S	Social and Political Perspectives on Gender and Sexuality	
Total Hours		6

Minimum Required Grade: C-

## Innovation Certificate

Innovation is an essential skill for identifying and solving problems in many fields. The Innovation Certificate creates an explicit opportunity for students to participate in the activities of innovation through coursework in design, entrepreneurship, prototyping, content creation, leadership, and creativity.

The Innovation Certificate is an interdisciplinary 12-credit certificate, which is itself flexible and innovative by design. This certificate has two parts: a customizable set of six 1-credit elective courses selected by a student to suit their individual interests, and the two capstone courses CIE 401: Creative Collaboration and CIE 402: Digital Portfolio.

Students will learn to isolate and communicate desired goals, forge networks across disciplines, share their individual skillsets, and operate collaboratively within an innovative ecosystem. The Innovation Certificate will uniquely combine focused training in contemporary applied fields as integrated and intertwined with broad liberal arts, entrepreneurial, and design skills.

## Post-secondary Certificate - Innovation

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	6
Elective Courses	6
Total Hours	12

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CIE 401	Creative Collaboration	3
CIE 402	Digital Portfolio	3
Total Hours		6

Minimum Required Grade: C-



### Elective Courses

CODE	HOURS
<b>Complete six 1-credit Special Topics (x91) or Workshops (x94) courses pre-approved for inclusion in the Innovation Certificate, and offered through participating colleges and programs.</b>	6
Total Hours	6

Minimum Required Grade: C-

# International Development Studies Minor

## Minor - International Development Studies

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** At least seven credits must be upper division credits.

### Summary

Core Courses	12
Content Courses	9
Total Hours	21

### Core Courses

CODE	TITLE	HOURS
<b>Complete four of the following courses:</b>		12
ANTY 333	Culture and Population	
ANTY 349	Social Change	
ANTY 426	Culture, Health and Healing	
BGEN 445	Sustainability Reporting	
BGEN 360	International Business	
COMX 204X	International and Development Communication	
ECNS 217	Issues in Economic Development	
ECNS 450	Adv. Topics in Economic Dev.	

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ENST 427	Social Issues:The Mekong Delta	
ENST 487	Globalization, Justice & Environment	
ENST 489S	Environmental Justice Issues & Solutions	
GPHY 141S	Geography of World Regions	
GPHY 338	Mountains and Society	
IDS 191	Special Topics	
IDS 491	Special Topics	
NRSM 170	International Environmental Change	
NRSM 424	Community Forestry & Conservation	
NRSM 475	Environment & Development	
PSCI 327	Politics of Mexico	
PSCI 377	Global Health Issues	
PSCI 420	Experimental Offering: Comparative Politics	
PSCI 431	Politics of Global Migration	
PSCI 463	Development Administration	
PSCI 482	Politics of the World Economy	
PTRM 451	Tourism & Sustainability	
SOCI 270	Intro Development Sociology	
SOCI 471	Gender and Global Development	
S W 323	Women & Soc Action Amer	
S W 465	Social Work Global Context	
Total Hours		12

Minimum Required Grade: C-

**Content Courses**

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses:</b>		9
ANTY 220	Culture & Society	
ANTY 241H	Central Asian Culture & Civilization	
ANTY 326E	Indigenous Peoples & the Ethics of Development	
ANTY 330X	Peoples and Cultures of World (Africa)	
ANTY 333	Culture and Population	
ANTY 402	Quantitative Ethnographic Field Methods	
ANTY 423	Culture and Identity	
ANTY 427	Anthropology of Gender	
BGEN 160S	Issues in Sustainability	
BMGT 410	Sustainable Business Practices	
COMX 415	Intercultural Communication	
COMX 421	Communication in Nonprofit Organizations	
COMX 493	Study Abroad: Hong Kong & China	
ECNS 101S	Economic Way of Thinking	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
ENST 493	Study Abroad: Environmental Justice Latin America	
ECNS 494	Senior Seminar (Sustainable Agriculture in Thailand)	
ENST 437	Climate Change: Mekong Delta	
GEO 107N	Natural Disasters	
GPHY 121S	Human Geography	
GPHY 433	Community Resilience	

University Of Montana

GPHY 444	High Asia	
HSTR 231H	Modern Latin America	
HSTR 337	Capitalism in Latin America	
HSTR 435	Latin American Human Rights & Memory	
JRNL 105X	Global Current Events	
NASX 475	Tribal Sovereignty	
NRSM 352	Mountain Environment and Development	
NRSM 391	Special Topics	
PSCI 220S	Intro to Comparative Government	
PSCI 230X	Intro to International Relations	
PSCI 311	Revolution & Reform in Modern China	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 443	Politics of Social Movements	
PTRM 353	Tourism, Livelihoods and Sustainability in Mountains	
SOCI 212S	Social Issues Southeast Asia	
SOCI 346	Rural Sociology	
SOCI 355	Population and Society	
SOCI 443	Sociology of Poverty	
SSEA 202X	Introduction to India	
Total Hours		9

Minimum Required Grade: C-

# Migration Studies Certificate

## Post-secondary Certificate - Migration Studies

College of Humanities & Sciences

**Degree Specific Credits:**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Core Courses	6
Elective Courses	6
Total Hours	12

### Core Courses

CODE	TITLE	HOURS
<b>Complete 6 credits of the following courses:</b>		6
ANTY 122S	Race and Minorities	
COMX 415	Intercultural Communication	
HSTR 230H	Colonial Latin America	
PSCI 398	Migration Studies Internship	
PSCI 431	Politics of Global Migration	
Total Hours		6

Minimum Required Grade: C-

### Elective Courses

CODE	TITLE	HOURS
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<b>Complete 6 credits of the following courses:</b>		6
<b>Social, Political, and Economic Determinants:</b>		
ANTY 104	Ancient Migrations	
ECNS 217	Issues in Economic Development	
HSTA 342H	African-American History to 1865	
HSTA 343H	African-American History Since 1865	
HSTR 335	Latin American Workers and Labor History	
HSTR 437	US-Latin America Relations	
PSCI 377	Issues in Global Health	
SOCI 270	Intro Development Sociology	
SOCI 355	Population and Society	
SOCI 443	Sociology of Poverty	
SOCI 446	Prostitution & Human Trafficking	
<b>Regional Contexts:</b>		
ANTY 353	Paleoindian Archaeology	
ENST 427	Social Issues: The Mekong Delta	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 468 & 469	Community and Regional Analysis	
GRMN 317L	Multicultural Literature in Contemporary Germany	
HSTA 101H	American History I	
HSTA 102H	American History II	
HSTR 231H	Modern Latin America	

HSTR 326	Contemporary Europe	
NASX 306X	Contemporary Global issues Indigenous People	
PSCI 322	Politics of Europe	
PSCI 325	Politics of Latin America	
PSCI 327	Politics of Mexico	
PSCI 336	European Union	
SOCI 212S	Social Issues Southeast Asia	
SOCI 346	Rural Sociology	
S W 323	Women and Social Action in the Americas	
<b>Environmental Contributors</b>		
ECNS 445	International Environmental Economic & Climate Change	
ENST 487	Globalization, Justice, and Environment	
GPHY 421	Sustainable Cities	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 475	Environment & Development	
PSCI 324	Climate Policies: China & the USA	
<b>Bridging Gaps and Divisions</b>		
COMX 412	Communication and Conflict	
COMX 424	Risk, Crisis, and Communication	
GBLD 110	Global Challenges and Leadership	
HSTR 435	Latin American Human Rights and Memory	
PSCI 348 U.S.	Multicultural Politics	
PSCI 443	Politics of Social Movements	



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S W 464	Cultural Humility in Social Work Practice: Valuing Diversity	
S W 465	Social Work in a Global Context	
THTR 385	Theatre of Social Justice	
Total Hours		6

Minimum Required Grade: C-

## Maureen and Mike Mansfield Center

### **Deena Mansour, Interim Executive Director**

The Maureen and Mike Mansfield Center was established in 1986 to pay tribute to Maureen and Mike Mansfield and to recognize their important contributions to U.S. Asian relations and public policy. The Center is an academic unit within the University of Montana and receives core funding from an endowment managed by the Maureen and Mike Mansfield Foundation. Mansfield Center faculty offer classroom instruction, conduct research, provide training for Asian and U.S. government personnel, and organize various types of conferences, all with a focus on East Asia. The Center faculty collaborate with the University's Asian Studies Program and several other campus units.

The Mansfield Center's Ethics and Public Affairs Program (formerly known as the Center for Ethics) focuses upon the relationship of values to public institutions and affairs. Its courses, seminars, lectures, conferences, and internships examine the role that ethical values can and should play in public life, moral quandaries faced by those who govern philosophical and practical dimensions of political ethics, and issues of leadership and character in public service.

## Missoula College

**Thomas Gallagher, Dean**

### MISSION

The mission of Missoula College is to create a comprehensive, accessible, student-centered learning environment that fosters individual growth, facilitates workforce development, and provides a foundation for advanced academic achievement.

### Vision of Excellence

We envision a future where Missoula College is recognized as a model of excellence for two-year education in Montana, empowering students to succeed in higher education and continuing to serve the needs of the community and workforce. We elevate the awareness of two-year education as a result of our high retention, graduation and placement rates. Through this demonstration of excellence, more students will enroll in two-year colleges, more businesses and industries will partner with two-year schools, and the state will receive the benefits of a more educated citizenry/workforce.

The Missoula College offers programs and services on four campuses:

1. the River Campus at 1205 East Broadway,
2. the West Campus at 2795 37th Avenue,
3. the Mountain Campus at 32 Campus Drive, and
4. the Bitterroot Campus in Hamilton.

The student support offices are located at the River Campus. All Business Technology programs, Health Professions programs, as well as a branch of the Mansfield Library, and a dining room are located on the River Campus. All Industrial Technology programs are located on the West Campus.

Students may attend courses at four campus sites and online. Courses are scheduled at a variety of times between 7 a.m. and 10 p.m., Monday through Saturday. The Missoula College Dean's Office, department chairs and/or program directors may be contacted for specific program and scheduling information.

### Bachelor of Applied Science Degree Program

A Bachelor of Applied Science (B.A.S.) degree is offered by the University of Montana - Missoula in collaboration with the Missoula College. The initial contact for information and degree planning for the B.A.S. degree is the Missoula College Academic Advising Center. This degree program is available for students who have completed an Associate of Applied Science degree from an accredited institution and who wish to continue toward completing a baccalaureate degree. For more information, see the Bachelor of Applied Science section of the catalog.

## **Associate of Applied Science and Certificate of Applied Science Programs**

The Associate of Applied Science (A.A.S.) and Certificate of Applied Science (C.A.S.) programs are designed to prepare an individual for employment in a specific career or career pathway. In some instances, particularly in Health Professions, the degree or certificate is a prerequisite for taking a licensing examination. The A.A.S. degree is not typically considered a transfer degree, although opportunities do exist at the University of Montana and some other baccalaureate degree-granting institutions for continuing in programs such as the University's Bachelor of Applied Science degree program.

The College's Surgical Technology and Respiratory Care programs are reviewed by their respective Joint Review Committees and accredited by the Commission on Accreditation of Allied Health Education Programs. The Food Service Management program is accredited by the American Culinary Federation Educational Institute Accrediting Commission, the Paralegal Studies program is approved by the American Bar Association, and the Nursing programs are approved by the Montana Board of Nursing and accredited by Accreditation Commission for Education in Nursing (ACEN). The Pharmacy Technology Program is accredited by American Society of Health System Pharmacists/Accreditation Council for Pharmacy Education (ASHP/ACPE).

## **Associate of Arts and Associate of Science Degree Programs**

The Associate of Arts and Associate of Science degrees are general education transfer degrees and do not officially include a major or minor courses of study, but students may focus on specific areas of emphasis in order to satisfy the degree requirements. To receive an Associate of Arts (AA) or Associate of Science (AS) degree, students must successfully complete all the general education requirements as described by Montana Board of Regents policy 301.10 Appendix 1. The minimum grade point average for the 60 credits required for the A.A. or A.S. is 2.0. At least 30 of the 60 required credits must be earned at UM, through either Missoula College or University of Montana-Missoula.

## **Credit Applicable Toward Associate of Arts, Associate of Science, and Baccalaureate Degrees**

Students may count up to 15 technical course credits towards the A.A., A.S., and baccalaureate degrees (except the B.A.S.; see the B.A.S. section of the catalog for more information). UP to 20 technical course credits may count if the student has previously earned an A.A.S. degree. Refer to the section on Technical Courses and Credit Maximums in this catalog for additional information. Students should visit with their advisor for more information.

## **Academic Support Services**

Services designed to increase the success of students enrolled at Missoula College are available at the College. Such services include the Academic Advising Center, tutoring and computer-based academic learning tools in the Academic Support Center, study skills workshops, basic skills developmental courses, access to Disability Services for Students, academic and financial aid reinstatement and follow-up assistance, individual student retention services, and other learning support activities.

# Applied Arts and Sciences Department

**Kimberly Reiser, Chair**

The Department of Applied Arts and Sciences provides instruction in five disciplines:

- communication,
- mathematics,
- behavioral science and psychology,
- science, and
- writing.

Many courses from these disciplines count towards the general education requirements for the Associate of Arts (AA) and Associate of Science (AS) degrees and frequently are programmatic requirements for Associate of Applied Science (AAS) degrees.

## Baccalaureate and Associates Degrees

- Bachelor of Applied Science
- Associate of Arts ("General A.A")
- Associate of Arts (A.A.) with a Concentration in Communication Studies
- Associate of Arts (A.A.) with a Concentration in Professional Communication
- Associate of Arts (A.A.) with a Concentration in Psychology
- Associate of Science (A.S.)
- Associate of Science (A.S.) with a Concentration in Business
- Associate of Science (A.S.) with a Concentration in Public Health

## Certificates

- Addiction Studies C.T.S.
- Certificate of General Studies

## Associate of Arts (A.A.)

The Department of Applied Arts and Sciences offers the Associate of Arts degree. The Associate of Arts degree is considered a general education transfer degree and does not include a major or minor course of study. To receive an Associate of Arts degree, students must:

- successfully complete all lower-division general education requirements with a letter grade of C- or better;
- earn a minimum of 60 credits, at least 30 of which must be from UM;
- and maintain an institutional cumulative GPA of 2.00 for all UM courses taken for a traditional letter grade (A-F).

Matriculating students may begin coursework in the autumn, spring or summer. Courses numbered below 100 do not count toward the 60 credit requirement or general education course requirements, but do fulfill financial aid credit load requirements.

Students planning on completing a baccalaureate degree are encouraged to select specific general education courses and electives that meet the requirements for that future major. Students work with their advisor to develop an AA degree plan to best prepare them to transition to a four-year degree.

## Baccalaureate Tracks and Emphasis Areas within the Associate of Arts Degree

Although the AA degree does not include a major or minor courses of study, students may elect to choose coursework that is part of a specific area of interest. Baccalaureate tracks are specific plans of study designed to help students earn an AA degree while simultaneously working towards UM baccalaureate degree requirements. Missoula College has worked with individual UM Departments to forge agreements to ensure that students completing baccalaureate tracks will enter into the major with numerous major requirements already fulfilled.

Recognized baccalaureate tracks within the Associate of Arts degree include:

- Business
- Chemical and Addiction Studies (by pursuing this emphasis, students complete both a general Associate of Arts degree and the preparatory coursework required to become a licensed addictions counselor.)
- Communication Science and Disorders
- Early Childhood Education
- Elementary Education
- Environmental Studies
- Healthcare Informatics
- Health and Human Performance

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- Health IT
- Parks, Tourism, and Recreation Management
- Police Science/Sociology (for individuals attending the Montana Law Enforcement Academy, a specialized Associate of Arts degree is offered through a collaboration among Missoula College UM, the University of Montana Department Of Sociology, and the Montana Law Enforcement Academy in Helena, MT.)
- Psychology
- Sociology
- Women, Gender, and Sexuality Studies

## Concentrations within the Associate of Arts Degree

Similar to pathways or areas of emphasis within the AA degree, concentrations are meant to help students focus on a specific area of interest. Unlike areas of emphasis, these concentrations are recorded on the student's transcript as a concentration of the AA degree itself. Recognized concentrations of the Associate of Arts degree include:

- Communication Studies
- Professional Communication

The goal of these concentrations is to provide students with an opportunity to receive an AA degree with a focus on an area that is of increasing demand to employers. In addition, these concentrations help prepare students for matriculation into a major program in Communication Studies. Students interested in pursuing the AA with one of the communication concentrations should contact Kimberly Reiser (Kim.Reiser@umontana.edu).

## Courses

An R after the course title indicates students may earn credit for each successful completion to the maximum number indicated after the R. Credits earned beyond this maximum will not count towards the total required for the AA degree.

## Associate of Arts - General AA

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The AA degree has three requirements:

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1. completion of UM's lower-division General Education Requirements (GERs),
2. a minimum of 60 total earned credits, and
3. a minimum cumulative GPA of 2.0.

At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula. Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

## Summary

Writing Skills	6
Introductory Writing Course	
Intermediate Writing Course	
Mathematics	3-4
Perspectives	21-27
Expressive Arts	
Historical & Cultural Studies	
Literary & Artistic Studies	
Social Sciences	
Ethical & Human Values	
Democracy and Citizenship	
Cultural and International Diversity	
Natural Sciences	
AA Degree Electives	13-27

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course



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**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

### Intermediate Writing Course

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

## Mathematics

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

## Perspectives

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

### Expressive Arts (A)

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>		3

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Minimum Required Grade: C-

## Literary & Artistic Studies (L)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Literary & Artistic Studies (L) designation.		3

Minimum Required Grade: C-

## Historical & Cultural Studies (H)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Historical & Cultural Studies (H) designation.		3

Minimum Required Grade: C-

## Social Sciences (S)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Social Sciences (S) designation.		3

Minimum Required Grade: C-

## Ethical & Human Values (E)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Ethical & Human Values (E) designation.		3

Minimum Required Grade: C-

## Democracy and Citizenship (Y)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.		3

Minimum Required Grade: C-

## Cultural and International Diversity (X)

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CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>	3

Minimum Required Grade: C-

### Natural Sciences (N)

CODE	TITLE	HOURS
	<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>	6

Minimum Required Grade: C-

## AA Degree Electives

**Note:** Number of elective credits required varies; student needs to ensure s/he earns at least 60 total credits for the AA degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if s/he has earned an AAS degree.)

CODE	TITLE	HOURS
	<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>	13-27

Minimum Required Grade: C-

## Associate of Arts (A.A.) - Communication Studies

### Associate of Arts - General AA; Communication Studies Concentration

#### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The AA degree has three requirements:

1. completion of UM's lower-division General Education Requirements (GERs),
2. a minimum of 60 total earned credits, and
3. a minimum cumulative GPA of 2.0.

At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula. Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

In addition, to receive to Associate of Arts with a concentration in Communication Studies, a student must complete the requirements specific to that degree.

## Summary

Degree Specific Requirements	24-25
Organizational Communication or Rhetorical Theory	
Statistics	
Communication Elective	
Writing Skills	6
Introductory Writing Course	
Intermediate Writing Course	
Mathematics	3
Perspectives	21-27
Expressive Arts	
Literary & Artistic Studies	
Historical & Cultural Studies	
Social Sciences	
Ethical & Human Values	
Democracy and Citizenship	
Cultural and International Diversity	
Natural Sciences	
AA Degree Electives	13-27

## Degree Specific Requirements for AA with a Concentration in Communication Studies

**Note:** Some courses required for the Associate of Arts with a concentration in Communication Studies satisfy multiple Perspectives or GER Categories; visit with your advisor for more information.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 140L	Introduction to Visual Rhetoric	3
M 115	Probability and Linear Mathematics	3
Total Hours		12

Minimum Required Grade: C-

**Organizational Communication or Rhetorical Theory**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
COMX 220S	Introduction to Organizational Communication	3
or COMX 240H	Introduction to Rhetorical Theory	
Total Hours		3

Minimum Required Grade: C-

**Statistics**

**Note:** Completion of one of these courses satisfies the Symbolic Systems GER category.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

**Communication Elective**

CODE	TITLE	HOURS
<b>Complete 6 credits in two directed elective courses. Directed electives must be approved by student's advisor.</b>		6

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

### Intermediate Writing Course

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

## Mathematics

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

## Perspectives

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

### Expressive Arts (A)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.		3

Minimum Required Grade: C-

### Literary & Artistic Studies (L)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Literary & Artistic Studies (L) designation.		3

Minimum Required Grade: C-

### Historical & Cultural Studies (H)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Historical & Cultural Studies (H) designation.		3

Minimum Required Grade: C-

### Social Sciences (S)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Social Sciences (S) designation.		3

Minimum Required Grade: C-

### Ethical & Human Values (E)

CODE	TITLE	HOURS
Complete a minimum 3 credits in any course with the Ethical & Human Values (E) designation.		3

Minimum Required Grade: C-



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### Democracy and Citizenship (Y)

CODE	TITLE	HOURS
	Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.	3

Minimum Required Grade: C-

### Cultural and International Diversity (X)

CODE	TITLE	HOURS
	Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.	3

Minimum Required Grade: C-

### Natural Sciences (N)

CODE	TITLE	HOURS
	Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.	6

Minimum Required Grade: C-

## AA Degree Electives

**Note:** Number of elective credits required varies; student needs to ensure s/he earns at least 60 total credits for the AA degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if s/he has earned an AAS degree.)

CODE	TITLE	HOURS
	Complete elective credits to attain the 60 credits required for the General AA degree.	13-27

Minimum Required Grade: C-

# Associate of Arts (A.A.) - Professional Communication

## Associate of Arts - General AA; Professional Communication Concentration

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The AA degree has three requirements:

1. completion of UM's lower-division General Education Requirements (GERs),
2. a minimum of 60 total earned credits, and
3. a minimum cumulative GPA of 2.0. At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula.

Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

In addition, to receive to Associate of Arts with a concentration in Professional Communication, a student must complete the requirements specific to that degree.

## Summary

Degree Specific Requirements	27-29
Statistics	
Communication Elective	
Writing Skills	6
Introductory Writing Course	
Intermediate Writing Course	
Mathematics	3
Perspectives	21-27
Expressive Arts	
Historical & Cultural Studies	
Literary & Artistic Studies	
Social Sciences	
Ethical & Human Values	
Democracy and Citizenship	
Cultural and International Diversity	
Natural Sciences	
AA Degree Electives	13-27

## Degree Specific Requirements for AA with a Concentration in Professional Communication

**Note:** Some courses required for the Associate of Arts with a concentration in Professional Communication satisfy multiple Perspectives or GER Categories; visit with your advisor for more information.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BMKT 225 or BMKT 265	Marketing or Social Media Strategy & Management	3
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 140L	Introduction to Visual Rhetoric	3
COMX 220S	Introduction to Organizational Communication	3
M 115	Probability and Linear Mathematics	3
WRIT 121	Intro to Technical Writing	3
Total Hours		18

Minimum Required Grade: C-

**Statistics**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
PSYX 222	Psychological Statistics	
SOCI 202	Social Statistics	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

**Communication Elective**

CODE	TITLE	HOURS
<b>Complete 3 credits in one directed elective course. Directed electives must be approved by student's advisor.</b>		3

**Writing Skills**

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**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

### Intermediate Writing Course

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

## Mathematics

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

## Perspectives

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

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**Expressive Arts (A)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>	3

Minimum Required Grade: C-

**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Literary &amp; Artistic Studies (L) designation.</b>	3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>	3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
	<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>	6

Minimum Required Grade: C-

**AA Degree Electives**

**Note:** Number of elective credits required varies; student needs to ensure s/he earns at least 60 total credits for the AA degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if s/he has earned an AAS degree.)

CODE	TITLE	HOURS
	<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>	13-27

Minimum Required Grade: C-

## Associate of Arts (A.A.) - Psychology

### Associate of Arts - General AA; Psychology Concentration

Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The AA degree has three requirements:

1. completion of UM's lower-division General Education Requirements (GERs),
2. a minimum of 60 total earned credits, and
3. a minimum cumulative GPA of 2.0.

At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula. Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

In addition, to receive to Associate of Arts with a concentration in Psychology, a student must complete the requirements specific to that degree.

## Summary



Degree Specific Requirements for an AA with a Concentration in Psychology		
Writing Skills		
Introductory Writing Course		
Intermediate Writing Course		
Mathematics		
Perspectives		
Expressive Arts		
Literary & Artistic Studies		
Historical & Cultural Studies		
Social Sciences		
Ethical & Human Values		
Democracy and Citizenship		
Cultural and International Diversity		
Natural Sciences		
AA Degree Electives		
Total Credits		60

### Degree Specific Requirements for an AA with a Concentration in Psychology

**Note:** Some courses required for the Associate of Arts with a concentration in Psychology satisfy multiple Perspectives or GER Categories; visit with your advisor for more information.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIT 110L or LIT 120L	Intro to Literature or Intro to Poetry	3
PSYX 100S	Intro to Psychology	3
PSYX 120	Introduction to Psychological Research Methods	3
PSYX 230	Developmental Psychology	3
PSYX 240	Fundamentals of Abnormal Psychology	3
PSYX 250N	Fundamentals of Biological Psychology	3
PSYX 291	Capstone Course	3
M 115 or higher	Complete at M course numbered 115 or higher	3
STAT 216 or PSYX 222	Introduction to Statistics or Psychological Statistics	4
Total Hours		28

Minimum Required Grade: C-

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

**Intermediate Writing Course**

CODE	TITLE	HOURS
	Complete any course designated as an Intermediate Writing Course during semester it's taken.	3

Minimum Required Grade: C-

**Mathematics**

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
	Complete any Mathematics course level 104 or higher (excluding M 111).	3-4

Minimum Required Grade: C-

**Perspectives**

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

**Expressive Arts (A)**

CODE	TITLE	HOURS
	Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.	3

Minimum Required Grade: C-

**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
	Complete a minimum 3 credits in any course with the Literary & Artistic Studies (L) designation.	3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

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CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>	3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
	<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>	6

Minimum Required Grade: C-

## AA Degree Electives

**Note:** Number of elective credits required varies; student needs to ensure s/he earns at least 60 total credits for the AA degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if s/he has earned an AAS degree.)

CODE	TITLE	HOURS
	<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>	13-27

Minimum Required Grade: C-

## Associate of Science (A.S.)

The Department of Applied Arts and Sciences offers the Associate of Science degree. The Associate of Science degree is considered a general education transfer degree and does not include a major or minor course of study. To receive an Associate of Science degree, students must:

- successfully complete all lower-division general education requirements with a letter grade of C- or better;
- earn a minimum of 60 credits, at least 30 of which must be from UM;
- and maintain an institutional cumulative GPA of 2.00 for all UM courses taken for a traditional letter grade (A-F).
- Complete 9 credits of transferable coursework in the areas of Science, Technology, Engineering, and Mathematics (STEM) beyond those taken as general education requirements.

Matriculating students may begin coursework in the autumn, spring or summer. Courses numbered below 100 do not count toward the 60 credit requirement or general education course requirements, but do fulfill financial aid credit load requirements.

Students planning on completing a baccalaureate degree are encouraged to select specific general education courses and electives that meet the requirements for that future major. Students work with their advisor to develop an AA degree plan to best prepare them to transition to a four-year degree.

## Associate of Science - General AS

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula. Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

## Summary

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Writing Skills		
Introductory Writing Course		
Intermediate Writing Course		
Mathematics		
Perspectives		
Expressive Arts		
Historical & Cultural Studies		
Literary & Artistic Studies		
Social Sciences		
Ethical & Human Values		
Democracy and Citizenship		
Cultural and International Diversity		
Natural Sciences		
Additional STEM Courses for the AS Degree		
AA Degree Electives		
Total Credits		60

### Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

#### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

**Intermediate Writing Course**

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

**Mathematics**

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

**Perspectives**

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

**Expressive Arts (A)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>		3

Minimum Required Grade: C-



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**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Literary &amp; Artistic Studies (L) designation.</b>	3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>		3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>		6

Minimum Required Grade: C-

**Additional STEM Courses for the AS Degree**

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses in the areas of Science, Technology, Engineering, and Mathematics (STEM) beyond those taken as general education requirements.</b>		9
<b>Mathematics:</b>		
M 105	Contemporary Mathematics	
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 122	College Trigonometry	
M 162	Applied Calculus	
<b>Sciences:</b>		
BIOB 101N	Discover Biology	
BIOB 109N	Montana Ecosystems	
BIOB 160N	Principles of Living Systems	
BIOB 161N	Principles of Living Systems Lab	

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BIOB 210N	Communicating Biology	
BIOH 104	Basic Human Biology	
BIOH 105	Basic Human Biology Lab	
BIOH 201N/202N	Human Anatomy and Physiology I and Lab	
BIOH 211N/212N	Human Anatomy and Physiology II and Lab	
BIOM 250	Microbiology for Health Sciences	
BIOM 251	Microbiology for Health Sciences Lab	
CAS 231N	Pharmacology and Addiction	
CHMY 121N	Introduction to General Chemistry	
GEO 101N	Introduction to Physical Geology	
GEO 102N	Introduction to Physical Geology Lab	
NUTR 221N	Basic Human Nutrition	
PHSX 105N	Fundamentals of Physical Science	
<b>Environmental Studies:</b>		
ENST 231H	Nature and Society	
<b>Business Technology:</b>		
ACTG 101	Accounting Procedures I	
ACTG 102	Accounting Procedures II	
ACTG 180	Payroll Accounting	
ACTG 201	Principles of Financial Accounting	
ACTG 202	Principles of Managerial Accounting	
ACTG 211	Income Tax Fundamentals	
ACTG 215	Fundamentals of Government & Non-Profit Accounting	
AHMS 144	Medial Terminology	

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AHMS 156	Medical Billing Fundamentals	
AHMS 216	Pharmaceutical Products	
AHMS 220	Medical Office Procedures	
AHMS 252	Computerized Medical Billing	
BFIN 205S	Personal Finance	
BGEN 105S	Introduction to Business	
BGEN 160S	Issues in Sustainability	
BMKT 265	Social Media Strategy & Management	
CSCI 113	Programming with C+	
CSCI 151	Fundamentals of Computer Science I	
CSCI 172	Intro to Computer Modeling	
CSCI 215E	Social & Ethical Issues in Computer Science	
CSCI 221	System Analysis and Design	
CSCI 240	Databases & SQL	
CULA 210	Nutritional Cooking	
DDSN 113A	Technical Drafting	
DDSN 114	Introduction to CAD	
DDSN 116	3D CAD	
DDSN 244	GIS Mapping	
DDSN 245	Civil Drafting	
ECNS 201S	Principles of Microeconomics	
GDSN 149A	Intro to Photoshop	
ITS 150	CCNA 1: Exploration	
ITS 152	CCNA 2: Exploration	

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ITS 165	Intro to Operating Systems and the Command Line	
ITS 210	Network OS-Desktop	
ITS 212	Network OS-Server Admin	
ITS 214	Network OS-Infrastructure	
ITS 221	Project Management	
ITS 222	Enterprise Security	
ITS 250	CCNA 3: Exploration	
ITS 252	CCNA 4: Exploration	
ITS 279	Cloud Systems	
ITS 280	Computer Repair & Maintenance	
ITS 289	Professional Certification	
MART 214	Digital Publishing & Design	
MART 232	Interactive Web II	
SRVY 230	Intro to Surveying for Engineers	

Minimum Required Grade: C-

## AS Degree Electives

**Note:** Number of elective credits required varies. Students need to ensure they earn at least 60 total credits for the AS degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if they have earned an AAS degree.)

CODE	TITLE	HOURS
<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>		13-27

Minimum Required Grade: C-

# Associate of Science (A.S.) - Business

## Associate of Science - General AS; Business Concentration

Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The AS degree has three requirements:

1. completion of UM's lower-division General Education Requirements (GERs),
2. a minimum of 60 total earned credits, and
3. a minimum cumulative GPA of 2.0.

At least 30 of the total 60 degree credits must be earned from Missoula College or UM-Missoula. Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).

In addition, to receive to Associate of Science with a concentration in Business, a student must complete the requirements specific to that degree.

## Summary

## University Of Montana

Degree Specific Requirements for an AS with a Concentration in Business		
Writing Skills		
Introductory Writing Course		
Intermediate Writing Course		
Mathematics		
Perspectives		
Expressive Arts		
Literary & Artistic Studies		
Historical & Cultural Studies		
Social Sciences		
Ethical & Human Values		
Democracy and Citizenship		
Cultural and International Diversity		
Natural Sciences		
AS Degree Electives		
Total Credits		60

### Degree Specific Requirements for an AS with a Concentration in Business

**Note:** Some courses required for the Associate of Science with a concentration in Business satisfy multiple Perspectives or GER Categories; visit with your advisor for more information.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
ACTG 102	Accounting Procedures II	3
ACTG 202	Principles of Managerial Accounting	3
BGEN 105S	Introduction to Business	3
BGEN 220E	Business Ethics & Social Responsibility	3
COMX 111A	Introduction to Public Speaking	3
CSCI 172	Introduction to Computer Modeling	3
ECNS 201S	Principles of Microeconomics	3
M 115 or M 121	Probability and Linear Math or College Algebra	3
STAT 216	Introduction to Statistics	3
Total Hours		30

Minimum Required Grade: C-

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-



**Intermediate Writing Course**

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

**Mathematics**

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

**Perspectives**

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

**Expressive Arts (A)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>		3

Minimum Required Grade: C-

**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Literary &amp; Artistic Studies (L) designation.</b>		3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

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CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>	3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
	<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>	6

Minimum Required Grade: C-

## Additional STEM Courses for the AS Degree

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses in the areas of Science, Technology, Engineering, and Mathematics (STEM) beyond those taken as general education requirements.</b>		9
<b>Mathematics:</b>		
M 105	Contemporary Mathematics	
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 122	College Trigonometry	
M 162	Applied Calculus	
<b>Sciences:</b>		
BIOB 101N	Discover Biology	
BIOB 109N	Montana Ecosystems	
BIOB 160N	Principles of Living Systems	
BIOB 161N	Principles of Living Systems Lab	
BIOB 210N	Communicating Biology	
BIOH 104	Basic Human Biology	
BIOH 105	Basic Human Biology Lab	
BIOH 201N/202N	Human Anatomy and Physiology I and Lab	
BIOH 211N/212N	Human Anatomy and Physiology II and Lab	
BIOM 250	Microbiology for Health Sciences	
BIOM 251	Microbiology for Health Sciences Lab	
CAS 231N	Pharmacology and Addiction	
CHMY 121N	Introduction to General Chemistry	

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GEO 101N	Introduction to Physical Geology	
GEO 102N	Introduction to Physical Geology Lab	
NUTR 221N	Basic Human Nutrition	
PHSX 105N	Fundamentals of Physical Science	
<b>Environmental Studies:</b>		
ENST 231H	Nature and Society	
<b>Business Technology:</b>		
ACTG 101	Accounting Procedures I	
ACTG 102	Accounting Procedures II	
ACTG 180	Payroll Accounting	
ACTG 201	Principles of Financial Accounting	
ACTG 202	Principles of Managerial Accounting	
ACTG 211	Income Tax Fundamentals	
ACTG 215	Fundamentals of Government & Non-Profit Accounting	
AHMS 144	Medical Terminology	
AHMS 156	Medical Billing Fundamentals	
AHMS 216	Pharmaceutical Products	
AHMS 220	Medical Office Procedures	
AHMS 252	Computerized Medical Billing	
BFIN 205S	Personal Finance	
BGEN 105S	Introduction to Business	
BGEN 160S	Issues in Sustainability	
BMKT 265	Social Media Strategy & Management	
CSCI 113	Programming with C+	

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CSCI 151	Fundamentals of Computer Science I	
CSCI 172	Intro to Computer Modeling	
CSCI 215E	Social & Ethical Issues in Computer Science	
CSCI 221	System Analysis and Design	
CSCI 240	Databases & SQL	
CULA 210	Nutritional Cooking	
DDSN 113A	Technical Drafting	
DDSN 114	Introduction to CAD	
DDSN 116	3D CAD	
DDSN 244	GIS Mapping	
DDSN 245	Civil Drafting	
ECNS 201S	Principles of Microeconomics	
GDSN 149A	Intro to Photoshop	
ITS 150	CCNA 1: Exploration	
ITS 152	CCNA 2: Exploration	
ITS 165	Intro to Operating Systems and the Command Line	
ITS 210	Network OS-Desktop	
ITS 212	Network OS-Server Admin	
ITS 214	Network OS-Infrastructure	
ITS 221	Project Management	
ITS 222	Enterprise Security	
ITS 250	CCNA 3: Exploration	
ITS 252	CCNA 4: Exploration	
ITS 279	Cloud Systems	

ITS 280	Computer Repair & Maintenance	
ITS 289	Professional Certification	
MART 214	Digital Publishing & Design	
MART 232	Interactive Web II	
SRVY 230	Intro to Surveying for Engineers	

Minimum Required Grade: C-

## AS Degree Electives

**Note:** Number of elective credits required varies. Students need to ensure they earn at least 60 total credits for the AS degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if they have earned an AAS degree.)

CODE	TITLE	HOURS
<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>		13-27

Minimum Required Grade: C-

# Associate of Science (A.S.) - Public Health

## Associate of Science - General AS; Public Health Concentration

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

### Catalog Year: 2021-22

The Associate of Science degree with a concentration in Public Health is designed to introduce the student to Public Health sciences while providing a transfer pathway toward the B.S. in Public Health. To receive an Associate of Science degree with a Concentration in Public Health, students must:

- Complete all lower-division general education requirements with a letter grade of C- or better;
- Earn a minimum of 60 credits, at least 30 of which must be from the University of Montana;
- Maintain an institutional cumulative GPA of 2.00 for all University of Montana courses taken for a traditional letter grade.
- Complete 9 credits of transferable coursework in the areas of Science, Technology, Engineering, and Mathematics (STEM) beyond those taken as general education requirements.
- Complete 9 credits of transferable Public Health coursework.

#### Notes:

- Matriculating students may begin coursework in the autumn, spring, or summer.
- Courses numbered below 100 do not count toward the 60 credit requirement or general education course requirements, but do fulfill financial aid credit load requirements.
- Students may work with their advisor to develop an AS degree plan to best prepare them to transition to a four-year degree.

## Summary

## University Of Montana

Degree Specific Requirements for an AS with a Concentration in Public Health		
Writing Skills		
Introductory Writing Course		
Intermediate Writing Course		
Mathematics		
Perspectives		
Expressive Arts		
Literary & Artistic Studies		
Historical & Cultural Studies		
Social Sciences		
Ethical & Human Values		
Democracy and Citizenship		
Cultural and International Diversity		
Natural Sciences		
AS Degree Electives		
Total Credits		60

### Degree Specific Requirements for an AS with a Concentration in Public Health

**Note:** Some courses required for the Associate of Science with a concentration in Public Health satisfy multiple Perspectives or GER Categories; visit with your advisor for more information.



CODE	TITLE	HOURS
<b>Complete 9 of the following courses:</b>		9
ANTY 126	Anthropology and Global Health	
ANTY 220S	Culture & Society	
BIOH 112	Human Form and Function I	
BIOH 113	Human Form and Function II	
BIOH 201N	Human Anatomy & Physiology I	
BIOH 211N	Human Anatomy & Physiology II	
BIOM 227	Vectors and Parasites	
BIOM 250N	Microbiology for Health Sciences	
HTH 110	Personal Health and Wellness	
KIN 201	Basic Exercise Prescription	
PUBH 155	Reimagining Global Health	
PUBH 230	Public Health Biology	
Total Hours		9

Minimum Required Grade: C-

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

**Intermediate Writing Course**

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

**Mathematics**

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

**Perspectives**

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

**Expressive Arts (A)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>		3

Minimum Required Grade: C-

University Of Montana

**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Literary &amp; Artistic Studies (L) designation.</b>	3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>		3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>		6

Minimum Required Grade: C-

**Additional STEM Courses for the AS Degree**

CODE	TITLE	HOURS
<b>Complete 9 credits of the following courses in the areas of Science, Technology, Engineering, and Mathematics (STEM) beyond those taken as general education requirements.</b>		9
<b>Mathematics:</b>		
M 105	Contemporary Mathematics	
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 122	College Trigonometry	
M 162	Applied Calculus	
<b>Sciences:</b>		
BIOB 101N	Discover Biology	
BIOB 109N	Montana Ecosystems	
BIOB 160N	Principles of Living Systems	
BIOB 161N	Principles of Living Systems Lab	

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BIOB 210N	Communicating Biology	
BIOH 104	Basic Human Biology	
BIOH 105	Basic Human Biology Lab	
BIOH 201N/202N	Human Anatomy and Physiology I and Lab	
BIOH 211N/212N	Human Anatomy and Physiology II and Lab	
BIOM 250	Microbiology for Health Sciences	
BIOM 251	Microbiology for Health Sciences Lab	
CAS 231N	Pharmacology and Addiction	
CHMY 121N	Introduction to General Chemistry	
GEO 101N	Introduction to Physical Geology	
GEO 102N	Introduction to Physical Geology Lab	
NUTR 221N	Basic Human Nutrition	
PHSX 105N	Fundamentals of Physical Science	
<b>Environmental Studies:</b>		
ENST 231H	Nature and Society	
<b>Business Technology:</b>		
ACTG 101	Accounting Procedures I	
ACTG 102	Accounting Procedures II	
ACTG 180	Payroll Accounting	
ACTG 201	Principles of Financial Accounting	
ACTG 202	Principles of Managerial Accounting	
ACTG 211	Income Tax Fundamentals	
ACTG 215	Fundamentals of Government & Non-Profit Accounting	
AHMS 144	Medial Terminology	

University Of Montana

AHMS 156	Medical Billing Fundamentals	
AHMS 216	Pharmaceutical Products	
AHMS 220	Medical Office Procedures	
AHMS 252	Computerized Medical Billing	
BFIN 205S	Personal Finance	
BGEN 105S	Introduction to Business	
BGEN 160S	Issues in Sustainability	
BMKT 265	Social Media Strategy & Management	
CSCI 113	Programming with C+	
CSCI 151	Fundamentals of Computer Science I	
CSCI 172	Intro to Computer Modeling	
CSCI 215E	Social & Ethical Issues in Computer Science	
CSCI 221	System Analysis and Design	
CSCI 240	Databases & SQL	
CULA 210	Nutritional Cooking	
DDSN 113A	Technical Drafting	
DDSN 114	Introduction to CAD	
DDSN 116	3D CAD	
DDSN 244	GIS Mapping	
DDSN 245	Civil Drafting	
ECNS 201S	Principles of Microeconomics	
GDSN 149A	Intro to Photoshop	
ITS 150	CCNA 1: Exploration	
ITS 152	CCNA 2: Exploration	

ITS 165	Intro to Operating Systems and the Command Line	
ITS 210	Network OS-Desktop	
ITS 212	Network OS-Server Admin	
ITS 214	Network OS-Infrastructure	
ITS 221	Project Management	
ITS 222	Enterprise Security	
ITS 250	CCNA 3: Exploration	
ITS 252	CCNA 4: Exploration	
ITS 279	Cloud Systems	
ITS 280	Computer Repair & Maintenance	
ITS 289	Professional Certification	
MART 214	Digital Publishing & Design	
MART 232	Interactive Web II	
SRVY 230	Intro to Surveying for Engineers	

Minimum Required Grade: C-

## AS Degree Electives

**Note:** Number of elective credits required varies. Students need to ensure they earn at least 60 total credits for the AS degree. Transfer students may count up to 30 transfer credits towards the total 60 necessary for degree. A maximum of 15 technical credits may be counted towards the total 60. (A student may use 20 technical credits towards the 60 if they have earned an AAS degree.)

CODE	TITLE	HOURS
<b>Complete elective credits to attain the 60 credits required for the General AA degree.</b>		13-27

Minimum Required Grade: C-

# Addiction Studies C.T.S.

## Certificate of Technical Studies - Addiction Studies

Missoula College

**Degree Specific Credits:** 28

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Notes:**

- The Certificate in Addiction Studies is a set of courses that meet the required 330 hours of addiction education with a requirement of a completed accompanying degree (Associate/Baccalaureate/ or Advanced Degree in specific disciplines, i.e. psychology, addictions, sociology, social work or similar emphasis areas.
- Students may only apply for state licensing exam after completing 1000 hours of supervised internships following degree completion.
- The Certificate of Addiction Studies is designed to benefit all qualifying degrees as defined by the MCA 37-35-202.

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## Summary

Addiction Studies Required Courses	
Total Hours	

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## Addiction Studies Required Courses



University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CAS 140X	Addictions and Diversity	3
CAS 201	Theories of Counseling	3
CAS 231N	Pharmacology & Addiction	3
CAS 242	Fundamentals of Substance Abuse and Addiction	3
CAS 243	Substance Abuse Counseling I	3
CAS 248	Substance Abuse Counseling II	3
CAS 252	Gambling and Gaming Disorders in Addiction Counseling	2
CAS 254	Co-Occuring Disorders Assessment/Treatment	2
CAS 260	Addiction Assessment/Documentation/Treatment Planning	3
CAS 261	Advanced Assessment/Treatment Planning	3
Total Hours		28

Minimum Required Grade: C-

## General Studies Certificate

In accordance with the mission of the University of Montana-Missoula, the objectives of general education coursework are to develop competent and humane individuals who are informed, ethical, literate, and engaged citizens of local and global communities. Students should become acquainted with issues facing contemporary society, participate in the creative arts, develop an understanding of science and technology, cultivate an appreciation of the humanities, and examine the history of different American and global cultures. Upon completion of the general education requirements students should be able to articulate ideas orally and in writing, understand and critically evaluate tangible and abstract concepts, and employ mathematical and other related skills appropriate to a technologically focused society. These foundational skills are important for students continuing on in both liberal arts and professional programs of study.

The Certificate of General Studies requires completion of University of Montana's lower-division general education requirements that reflect the Montana University System's General Education Core. Students may use the certificate to demonstrate completion of lower-division general education requirements when transferring within the MUS or as a milestone to earning an Associate of Arts or Associate of Science degree at Missoula College, University of Montana.

To receive the Certificate of General Studies, students must:

- Complete UM's lower-division General Education Requirements (GERs) that also fulfill the general education requirements outlined by the Montana University System (the MUS Core), excluding the Group III requirements.
- Earn a minimum of 30 credits, and
- Have a minimum cumulative GPA of 2.0.
- At least 16 of the total 30 degree credits must be earned from Missoula College or UM-Missoula.

### Notes:

- Missoula College students are limited to enrolling in lower-division coursework (course level 100 or 200).
- All courses taken to satisfy General Education Requirements must be taken for a traditional letter grade and must be passed with a grade of C- or better.
- Students graduating with an Associate of Arts Degree or an Associate of Science Degree have been granted an exception to the Group III requirements. Missoula College students who continue to Mountain Campus without graduating with either of these degrees will need to complete the Group III requirement unless their declared four-year major has been granted an exception.

## Certificate of Applied Science - General Studies

### Missoula College

**Degree Specific Credits:** 30-37

**Required Cumulative GPA:** 2.0

## Summary

Writing Skills	6
Introductory Writing Course	
Intermediate Writing Course	
Mathematics	3-4
Perspectives	21-27
Expressive Arts	
Historical & Cultural Studies	
Literary & Artistic Studies	
Social Sciences	
Ethical & Human Values	
Democracy and Citizenship	
Cultural and International Diversity	
Natural Sciences	
Total	30-37

## Writing Skills

**Rule:** Complete the following subcategories. 6 total credits required.

**Note:** NOTE: Students who place into and successfully complete WRIT 201 are considered to have satisfied both the WRIT 101 and the Lower-Division Approved Writing Course General Education Requirements.

### Introductory Writing Course

**Note:** Appropriate placement into WRIT 101/WRIT 201 required. Prerequisites may apply.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
WRIT 101	College Writing I	3
or WRIT 201	College Writing II	

Minimum Required Grade: C-

**Intermediate Writing Course**

CODE	TITLE	HOURS
<b>Complete any course designated as an Intermediate Writing Course during semester it's taken.</b>		3

Minimum Required Grade: C-

**Mathematics**

**Note:** Appropriate placement into mathematics courses required. Prerequisites may apply. If a student successfully places into and completes a mathematics (either "M" or "STAT") course that is also considered a Symbolic System, that course may be used to count towards both the Mathematics and Symbolic Systems General Education Requirements.

CODE	TITLE	HOURS
<b>Complete any Mathematics course level 104 or higher (excluding M 111).</b>		3-4

Minimum Required Grade: C-

**Perspectives**

**Rule:** A minimum of 3 credits towards each perspective category is required. 21-27 total credits required.

**Note:** Some courses satisfy multiple Perspectives or GER Categories; visit with your advisor for more information. Students who take the maximum number of Perspective "double-dippers" possible will be able to complete the Perspectives with a total of 21 credits.

**Expressive Arts (A)**

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Expressive Arts (A) designation.</b>		3

Minimum Required Grade: C-

University Of Montana

**Literary & Artistic Studies (L)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Literary &amp; Artistic Studies (L) designation.</b>	3

Minimum Required Grade: C-

**Historical & Cultural Studies (H)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Historical &amp; Cultural Studies (H) designation.</b>	3

Minimum Required Grade: C-

**Social Sciences (S)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Social Sciences (S) designation.</b>	3

Minimum Required Grade: C-

**Ethical & Human Values (E)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Ethical &amp; Human Values (E) designation.</b>	3

Minimum Required Grade: C-

**Democracy and Citizenship (Y)**

CODE	TITLE	HOURS
	<b>Complete a minimum 3 credits in any course with the Democracy and Citizenship (Y) designation.</b>	3

Minimum Required Grade: C-

**Cultural and International Diversity (X)**

University Of Montana

CODE	TITLE	HOURS
<b>Complete a minimum 3 credits in any course with the Cultural and International Diversity (X) designation.</b>		3

Minimum Required Grade: C-

**Natural Sciences (N)**

CODE	TITLE	HOURS
<b>Complete a minimum 6 credits in any course with the Natural Sciences (N) designation. At least one course must have a laboratory component.</b>		6

Minimum Required Grade: C-

# Business and Technology Department

## **Michelle Boller, Chair**

The Business and Technology department of Missoula College collaborates with business and industry to prepare graduates to compete in and contribute to a dynamic global society. The department attracts and retains skilled faculty with the professional experience and theoretical background to utilize diverse instruction which reflects current and emerging business practices. Faculty actively engage students in the learning process by integrating experiential technical education and empowering students to adapt to an ever-changing world.

Students may choose from six Associate of Applied Science degree programs and four Certificate of Applied Science programs. Degree programs include Accounting Technology with an optional concentration in Computer Support; Administrative Management with an optional concentration in Social Media Management; Food Service Management; Hospitality Management; Medical Information Technology with concentrations in Health Information Coding and Medical Administrative Assisting; Paralegal Studies; and Management with concentrations in Entrepreneurship and Sales and Marketing. Certificate of Applied Science programs include Business Media Design, Culinary Arts, Customer Relations, Hospitality Management, Medical Reception, and Sales and Marketing. Certificate of Technical Skills programs include Medical Claims Service Specialist.

## **Associates of Applied Science and Certificates**

### **Accounting Technology:**

- Accounting Fundamentals C.A.S.
- Accounting Technology A.A.S.
- Accounting Technology A.A.S., Computer Support Concentration

### **Applied Computing and Engineering:**

- Information Technology A.A.S. - Network Administration and Security
- Cloud Computing C.T.S.
- Computer Support C.A.S.
- Cybersecurity C.T.S.

### **Big Sky Culinary Institute:**

- Food Service Management A.A.S.
- Culinary Arts C.A.S.

### **Business Management:**

## University Of Montana

- Business Management A.A.S. - Marketing & Entrepreneurship Concentration
- Customer Relations C.A.S.
- Business Media Design C.A.S.
- Sales and Marketing C.A.S.

### **Medical Information Technology:**

- Medical Information Technology A.A.S., Health Information Coding Concentration
- Medical Information Technology A.A.S., Medical Administrative Assisting Concentration
- Medical Claims Specialist C.T.S.
- Medical Reception C.A.S.

### **Legal Studies:**

- Legal Studies C.A.S.
- Paralegal Studies A.A.S.



# Accounting Fundamentals C.A.S.

## Certificate of Applied Science - Accounting Fundamentals

Missoula College

**Degree Specific Credits: 30**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** See Program Director for advising regarding scope and sequence, course prerequisites, and math and writing placement assessments.

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### Summary

CODE	TITLE	HOURS
Accounting Fundamentals Required Courses		30
Total Hours		30

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### Accounting Fundamentals Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
ACTG 102	Accounting Procedures II	3
ACTG 130	Applied Accounting and Decision Making	3
ACTG 180	Payroll Accounting	3
BGEN 215	Career Readiness	3
BGEN 220E	Business Ethics and Social Responsibility	3
COMX 115S	Introduction to Interpersonal Communications	3
CSCI 172	Intro to Computer Modeling	3
M 115	Probability and Linear Mathematics	3
or M 105	Contemporary Mathematics	
WRIT 121	Intro to Technical Writing	3
Total Hours		30

Minimum Required Grade: C-

## Accounting Technology A.A.S.

**Lisa Swallow, Director**

Almost all organizations need either in-house financial staff or outside bookkeeping/accounting services to aid with financial data compilation and reporting. Bookkeepers and accountants maintain financial records and often participate in strategic planning and other fiscal decisions. Graduates work in small businesses as full charge bookkeepers or large businesses as members of an accounting staff. They are required to communicate extensively with vendors, clients, and employees and are often key players in business projections, cash forecasting, and budgeting. This program provides students the marketable skills for employability in a variety of organizations including service, retail, non-profit, governmental, and accounting firms. Program graduates use technology to gather, compile and analyze data. They communicate budgetary and accounting information to non-financial colleagues and managers. Students considering this program should be analytical, detail-oriented, and enjoy using current technology.

### Associate of Applied Science - Accounting Technology

**Missoula College**

**Degree Specific Credits: 61**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Accounting Technology Required Courses	61
Total Hours	61

### Accounting Technology Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
ACTG 102	Accounting Procedures II	3
ACTG 130	Applied Accounting and Decision Making	3
ACTG 180	Payroll Accounting	3
ACTG 202	Principles of Managerial Accounting	3
ACTG 211	Income Tax Fundamentals	4
ACTG 215	Fnd of Govt & Not Profit Acct	3
ACTG 250	Accounting Capstone	4
ACTG 298	Internship	2
BGEN 105S	Introduction to Business	3
BGEN 160S	Issues in Sustainability	3
BGEN 215	Career Readiness	3
BGEN 220E	Business Ethics and Social Responsibility	3
BFIN 205S	Personal Finance	3
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
CSCI 172	Intro to Computer Modeling	3
M 115	Probability and Linear Mathematics	3
WRIT 101	College Writing I	3
WRIT 121	Intro to Technical Writing	3
Total Hours		61

Minimum Required Grade: C-

# Accounting Technology A.A.S. - Computer Support

**Lisa Swallow, Director**

In addition to accounting technician training, students selecting this concentration will be prepared to install, configure, manage and maintain LAN and/or WAN systems; install, configure, manage and maintain computer hardware and software; train and support system users; administer system security; and upgrade, update and expand network systems.

## Associate of Applied Science - Accounting Technology; Computer Support Concentration

**Missoula College**

**Degree Specific Credits: 59**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Accounting Technology Required Courses	62
Total Hours	62

### Accounting Technology Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		62
ACTG 101	Accounting Procedures I	3
ACTG 102	Accounting Procedures II	3
ACTG 130	Applied Accounting and Decision Making	3
ACTG 180	Payroll Accounting	3

University Of Montana

ACTG 202	Principles of Managerial Accounting	3
ACTG 211	Income Tax Fundamentals	4
ACTG 250	Accounting Capstone	4
ACTG 298	Internship	2
BGEN 105S	Introduction to Business	3
BGEN 215	Career Readiness	3
COMX 111A	Introduction to Public Speaking	3
CSCI 105	Computer Fluency	3
CSCI 172	Intro to Computer Modeling	3
CSCI 215E	Social & Ethical Issues in CS	3
ITS 150	CCNA 1: Exploration	3
ITS 165	OS Commands and Scripts	3
ITS 210	Network OS - Desktop	3
ITS 280	Computer Repair & Maint.	3
ITS 289	Professional Certification	1
M 115	Probability and Linear Mathematics	3
WRIT 101	College Writing I	3
or WRIT 121	Intro to Technical Writing	
Total Hours		62

Minimum Required Grade: C-

# Business Management A.A.S. - Marketing & Entrepreneurship Concentration

## Associate of Applied Science - Business Management; Marketing & Entrepreneurship Concentration

Missoula College

**Degree Specific Credits:** 64

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for advising regarding scope and sequence, course prerequisites, and math and writing placement assessments.

### Summary

Required Courses	64
Total Hours	64

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
ACTG 102	Accounting Procedures II	3
ACTG 130	Applied Accounting and Decision Making	2
BGEN 105S	Introduction to Business	3
BGEN 215	Career Readiness	3
BGEN 220E	Business Ethics & Social Responsibility	3
BFIN 205S	Personal Finance	3

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BMGT 235	Management	3
BMGT 245	Customer Service Management	3
BMGT 298	Management Internship	2
BMGT 299	Capstone: Entrepreneurship	3
BMKT 112	Applied Sales	3
BMKT 225	Marketing	3
BMKT 240	Advertising	3
BMKT 265	Social Media Strategies and Management	3
COMX 250	Intro to Public Relations	3
CSCI 172	Introduction to Computer Modeling	3
ECNS 201S	Microeconomics	3
M 115	Probability and Linear Mathematics	3
MART 214	Digital Publishing & Design	3
MART 232	Interactive Web II	3
WRIT 101	College Writing I	3
Total Hours		45

Minimum Required Grade: C-



# Business Media Design C.A.S.

## Cheryl Galipeau, Director

People respond to emotion, engagement, and strong design. Combine your unique talents in digital media, expressive arts, visual communications, and business toward a career in media design for businesses, education or nonprofit organizations. You will learn:

- Media history and business foundations
- Work extensively in Adobe Creative Suite
- Practice effective visual composition and messaging
- Create interesting imagery and tell compelling stories

Projects require story development, original and edited still photographs, and original and edited audio and visual work in both still and time-based mediums. Graduates are prepared for immediate skill application. Successful completion of the C.A.S. meets prerequisites required for entry into the undergraduate programs for UM s Media Arts.

## Student Outcomes:

- Gain foundational knowledge in digital and information technologies, the nature of business enterprise, media history, typography, visual symbols, art, and artistic aesthetics and expression
- Create, edit, and design audio/visual work in both the still image and time based mediums that focus on artistic expression and its relationship to digital technology
- Create business documents and publications using common business applications while following ethical, research, and industry standard guiding principles and best practices
- Assemble web assets needed to construct a complete website using current W3C web html document type standards, Search Engine Optimization strategies, and best web practices for file and domain management, container layout, navigation, and attractive web arrangement using principles and elements of design in an accessible web format
- Plan, create, and organize artistically pleasing and effective print layouts based on the intended audience, organizational goals, and sound design through typography and imagery
- Use photo editing software to create, edit and customize digital images in appropriate image size, resolution, and file type for the intended publication medium

## Certificate of Applied Science - Business Media Design

### Missoula College

**Degree Specific Credits:** 33-36

**Required Cumulative GPA:** 2.0

**Catalog Year: 2021-22**

**Note:** See Program Director for advising regarding scope and sequence, course prerequisites, and math and writing placement assessments.

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**Summary**

Business Media Design Required Courses	33-36
Total Hours	33-36

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**Business Media Design Required Courses**

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 105S	Introduction to Business	3
BGEN 215	Career Readiness	3
CAPP 120 or Assesement	Introduction to Computers	0-3
COMX 115S or COMX 212X	Introduction to Interpersonal Communications or Introduction to Intercultural Communication	3
GDSN 149A	Digital Imaging I	3
M 115	Probability and Linear Mathematics	3
MART 101L	Intro to Media Arts	3
JRNL 100H or MART 201H	Media History & Literacy Or History of Digital Arts & Culture	3
MART 112A	Introduction to Film Editing	3
or JRNL 257A	Beginning Visual Journalism	
MART 214	Digital Publishing & Design	3
MART 232	Interactive Web II	3
WRIT 101	College Writing I	3
Total Hours		33-36

Minimum Required Grade: C-

## Cloud Computing C.T.S.

The Certificate of Technical Skills in Cloud Computing is designed to provide the foundations for students to understand, use, and provision cloud resources. As cloud computing becomes ever more prevalent in society these skills become ever more necessary. Students will gain competence in general networking and network infrastructure; installation, use, and administration of Operating Systems; Virtualization; fundamental security concepts; and cloud computing concepts, use, and provisioning.

This certificate is mostly a subset of the courses leading to an Associate of Applied Science in Information Technology (either concentration: Network Administration and Security or Programming and Application Development) as well as closely aligned with a BS in Management Information Systems. It is expected that students completing those degrees could complete the certificate with the addition of one or two courses.

## Certificate of Technical Studies - Cloud Computing

### Missoula College

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	18
Total Hours	18

### Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CSCI 105	Computer Fluency	3
CSCI 240	Databases & SQL	3
ITS 150	CCNA 1	3
ITS 165	Intro to Operating Systems and the Command Line	3
ITS 212	Network OS - Server	3
ITS 279	Cloud Systems	3
Total Hours		18

Minimum Required Grade: C-

## Computer Support C.A.S.

**Victor Valgenti, Program Director**

Computer Support is a 31-credit certificate program that prepares students for entry-level positions in the computing field. Required coursework includes programming, operating systems, networking, PC hardware, data modeling, and web technologies. Graduates pursue careers as help desk technicians, computer repair professionals, and computer support specialists. All students have the opportunity to complete the CompTIA A+ Computer Support Specialist industry certification. Coursework for the certificate program also leads to the A.A.S. degree in Information Technology.

### Certificate of Applied Science - Computer Support

Missoula College

**Degree Specific Credits:** 33-34

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Computer Support Core Courses	30
Mathematics	3-4
Total Hours	33-34

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### Computer Support Core Courses

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 105S	Introduction to Business	3
CSCI 105	Computer Fluency	3
CSCI 150	Introduction to Computer Science	3
CSCI 172	Intro to Computer Modeling	3
ITS 150	CCNA 1: Exploration	3
ITS 165	Introduction to Operating Systems and the Command Line	3
ITS 212	Network Operating Systems - Server	3
ITS 279	Cloud Systems	3
ITS 280	Computer Repair & Maint.	3
WRIT 101	College Writing I	3
Total Hours		30

Minimum Required Grade: C-

## Mathematics

CODE	TITLE	HOURS
<b>Complete one of the following courses or any Mathematics course having one of these as a prerequisite:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra	
M 151	Precalculus	
Total Hours		3-4

Minimum Required Grade: C-

## Culinary Arts C.A.S.

### Aimee Elliot, Director

Students entering the Culinary Arts Certificate program or Food Service Management degree program prepare for careers in the hospitality industry. Students develop the skills needed to then seek employment in hotels, restaurants, resorts, casinos, clubs, catering, and corporate dining. Culinary careers encompass restaurant management, sales, product development, and entrepreneurship.

To meet the growing demand of the hospitality industry, two program options are available. Students may earn a Culinary Arts Certificate of Applied Science or a Food Service Management Associate of Applied Science degree.

The Culinary Arts certificate program is three semesters and provides an introduction to the field of culinary arts. Students prepare for an entry-level position in the expanding and challenging food service industry. This program incorporates comprehensive hands-on learning experiences complemented by supportive courses designed to prepare students for a wide range of career opportunities. This program also allows for a seamless transition into the Food Service Management degree.

## Certificate of Applied Science - Culinary Arts

### Missoula College

**Degree Specific Credits:** 45

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

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## Summary

Culinary Arts Required Courses	45
Total Hours	45

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## Culinary Arts Required Courses



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BMGT 235	Mangement	3
COMX 115S	Introduction to Interpersonal Communications	3
CULA 100	Culinary Arts Fundamentals	2
CULA 101	Introduction to Knife Skills and Butchery	2
CULA 105	Food Service Sanitation	2
CULA 156	Dining Room Procedures	3
CULA 157	Pantry & Garde Manger	3
CULA 158	Breakfast and Sandwich Cookery	3
CULA 160	Soups, Stocks, & Sauces	3
CULA 161	Meats & Vegetables	3
CULA 162	Storeroom Management and Receiving Operations	2
CULA 165	Baking & Pastry	5
CULA 210	Nutritional Cooking	3
CULA 255	Montana Meats and Charcuterie	2
M 105	Contemporary Mathematics	3
WRIT 121	Intro to Technical Writing	3
or WRIT 101	College Writing I	
Total Hours		45

Minimum Required Grade: C-

# Customer Relations C.A.S.

## Cheryl Galipeau, Director

The Customer Relations Certificate prepares students to give customers what they expect, and then give them more! Increase your competitive advantage by creating a service culture, building and maintaining relationships, and developing customer service management systems.

Core topics include:

- Communication verbal/nonverbal , navigate challenges, effective conflict resolution, and listening skills
- Manage interpersonal relationships and build teams
- Public relations in organizations, reputation management and trust, and effective internal and external customer relationships.

Learn to turn common problems into service opportunities! Emphasis in business, computers, communications, and exceptional service skills, add to your value as a customer relations professional. Customer Relations can be earned independently, or combined with second-year curriculum toward an Associate of Applied Science degree in Administrative Management.

This certificate is offered fully online. Note: Second year A.A.S. curriculum is not available fully online. Graduates are prepared for work as customer service representatives and managers in a variety of industries.

Student Outcomes:

Upon completion of the program, students will:

- Formulate service policies for excellent customer service management
- Apply service-level decisions to develop staff, enhance customer loyalty, and deal with challenges and conflicts while serving both internal and external customers
- Demonstrate the workplace skills of effective communication (oral, written, nonverbal), problem-solving, managing interpersonal relationships and collaborating with teams, thinking critically, and leadership
- Ethically use research and the tools of technology to create and organize business documents efficiently, accurately, and artfully designed
- Understand, appreciate, and recognize opportunities of diverse populations and cultures

Related Job Titles:

- Customer Service Representative
- Customer Care
- Call Centers
- Client Relations

## University Of Montana

- Client Services
- Guest Services
- Information Clerk
- Receptionist

## Certificate of Applied Science - Customer Relations

### Missoula College

**Degree Specific Credits:** 30-33

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** The Certificate of Applied Science in Customer Relations is available fully online. See Program Director for advising regarding scope and sequence, course prerequisites, and math and writing placement assessments.

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### Summary

Customer Relations Required Courses	30-33
Total Hours	30-33

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### Customer Relations Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
BGEN 105S	Introduction to Business	3
BGEN 215	Career Readiness	3
BGEN 220E	Business Ethics and Social Responsibility	3
BMGT 245	Customer Service Management	3
CAPP 120 or Assesement	Introduction to Computers	0-3
CAPP 154	MS Word	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 250	Intro to Public Relations	3
CSCI 172	Intro to Computer Modeling	3
M 105	Contemporary Mathematics	3
or M 115	Probability and Linear Mathematics	
WRIT 101	College Writing I	3
Total Hours		30-33

Minimum Required Grade: C-

## Cybersecurity C.T.S.

The Certificate of Technical Studies in Cybersecurity is meant to provide individuals with technical education in information assurance. The curriculum is based upon the Core Knowledge Units developed by the National Security Agency (NSA) and the Department of Homeland Security (DHS). Students will gain skills in basic data analysis; programming; networking concepts; IT systems components; system administration; fundamental security design principles; cyber-threats and cyber-defense; cryptography; and policy, legal, ethics and compliance.

This certificate is a subset of courses leading to the Associate of Applied Science in Information Technology's concentration in Network Administration & Security and also to a BS in Management Information Systems.

The NSA and DHS have designated Missoula College as a National Center of Academic Excellence in Cyber-Defense Two-Year Education (CAE2Y). Those students completing the list of courses: CSCI 105, CSCI 172, CSCI 215E, ITS 150, ITS 214, ITS 222 will receive special recognition indicating completion of an NSA and DHS approved Cybersecurity CAE program of study.

## Certificate of Technical Studies - Cybersecurity

### Missoula College

**Degree Specific Credits:** 18-21

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** All students are required to take at least one course at Missoula College from the following list: CSCI 215E, ITS 150, or ITS 222.

## Summary

Programming	3
Data Analysis	3
Policy, Legal, Ethics and Compliance	3-6
Networking & IT Systems Components	3
System Administration	3
Security Design Principles, Cyber Threats/Defense, and Cryptography	3
Total Hours	18-21

## Programming

**Note:** Only Mountain Campus students are eligible to register for BMIS 365.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 105	Computer Fluency	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
BMIS 365	Business App Development	
Total Hours		3

Minimum Required Grade: C-

## Data Analysis

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
CSCI 172	Intro to Computer Modeling	3
Total Hours		3

Minimum Required Grade: C-

## Policy, Legal, Ethics and Compliance

**Note:** Only Mountain Campus students are eligible to register for ACTG 321 or the BGEN 220E/BGEN 361 combination.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 215E	Social & Ethical Issues in CS	
ACTG 321	Acct Information Systems I	
Or Complete the following two courses:		6
BGEN 220E	Business Ethics and Social Responsibility	
and BGEN 361	Principles of Business Law	
Total Hours		3-6

Minimum Required Grade: C-

## Networking & IT Systems Components

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
ITS 150	CCNA 1: Exploration	3
Total Hours		3

Minimum Required Grade: C-

## System Administration

**Note:** Only Mountain Campus students are eligible to register for BMIS 471.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ITS 210	Network OS - Desktop	
ITS 214	Network OS - Infrastructure	
BMIS 471	Fund of Network & Security Management	
Total Hours		3

Minimum Required Grade: C-

## Security Design Principles, Cyber Threats/Defense, and Cryptography

**Note:** Only Mountain Campus students are eligible to register for BMIS 472.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ITS 222	Enterprise Security	
BMIS 472	Advanced Network & Security Management	
Total Hours		3

Minimum Required Grade: C-



## Food Service Management A.A.S.

**Aimee Elliot, Director**

The Food Service Management program culminates in an Associate of Applied Science Degree. This program combines theory, practical training, and industry experience to prepare students for entry-level and management positions in the diverse and dynamic hospitality industry. The degree program is designed to continue principles taught in the Culinary Arts certificate program. The spectrum of learning is expanded to include more in-depth professional studies thereby enhancing employment options. Accreditation by the American Culinary Federation ensures graduates' eligibility for certification as an ACF Certified Culinarian.

Technical subject areas include introduction to the industry, basic baking, patisserie, cost control, dining room service, Garde manger, nutritional cooking, fundamental cooking principles, short order cookery, a la carte stations, menu planning, supervised internship, and the recognized sanitation certificate awarded by the National Restaurant Association Educational Foundation.

### Associate of Applied Science - Food Service Management

**Missoula College**

**Degree Specific Credits: 63**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Food Service Management Required Courses	63
Total Hours	63

### Food Service Management Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 133X	Food and Culture	3
BMGT 235	Management	3

University Of Montana

COMX 115S	Introduction to Interpersonal Communications	3
CULA 100	Culinary Arts Fundamentals	2
CULA 101	Introduction to Knife Skills and Butchery	2
CULA 105	Food Service Sanitation	2
CULA 156	Dining Room Procedures	3
CULA 157	Pantry & Garde Manger	3
CULA 158	Breakfast and Sandwich Cookery	3
CULA 160	Soups, Stocks, & Sauces	3
CULA 161	Meats & Vegetables	3
CULA 162	Storeroom Management and Receiving Operations	2
CULA 165	Baking & Pastry	5
CULA 205	Catering Management	2
CULA 206	Restaurant Management	3
CULA 210	Nutritional Cooking	3
CULA 220	Purchasing and Cost Controls	3
CULA 298	Food Service Internship	3
CULA 299	Culinary Arts Capstone	3
M 105	Contemporary Mathematics	3
WRIT 121	Intro to Technical Writing	3
or WRIT 101	College Writing I	
Total Hours		63

Minimum Required Grade: C-

# Information Technology A.A.S. - Network Administration and Security

## Victor Valgenti, Program Director

The Network Administration and Security concentration provides students the foundational skills for supporting users and computing in a networked environment. In addition, the NSA and DHS have designated Missoula College as a National Center of Academic Excellence in Cyber-Defense Two-Year Education (CAE2Y). This degree emphasizes cyber-security at every level of information technology from simple use, to computer support and system administration. Finally, as a member of AWS Educate, Missoula College also provides expertise in Cloud computing which is a fundamental skill for the future as companies more and more move to virtual operations. This concentration includes work in Operating Systems and System Administrations, Routing, Hardware Maintenance and Repair, and Scripting and Security.

The University of Montana is a Cisco Networking Academy, CompTIA Authorized Academy, and a member of the Microsoft Developers Network Academic Alliance. Opportunities exist for professional certification from Cisco (CCNA, CCENT, CCVA), Microsoft and Comp TIA (A+, Network+ and Security+).

## Associate of Applied Science - Information Technology; Network Administration and Security Concentration

### Missoula College

**Degree Specific Credits:** 60-61

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Information Technology Core Courses	30
Mathematics	3-4
Network Administration and Security Concentration Requirements	27
Total Hours	60-61

### Information Technology Core Courses

**Note:** Completion of IT core courses fulfills requirements for the C.A.S. in Computer Support.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 105S	Introduction to Business	3
CSCI 105	Computer Fluency	3
CSCI 150	Introduction to Programming	3
CSCI 172	Intro to Computer Modeling	3
ITS 150	CCNA 1: Exploration	3
ITS 165	Introduction to Operating Systems and the Command Line	3
ITS 212	Network OS - Server	3
ITS 279	Cloud Systems	3
ITS 280	Computer Repair & Maint.	3
WRIT 101	College Writing I	3
Total Hours		30

Minimum Required Grade: C-

## Mathematics

CODE	TITLE	HOURS
<b>Complete any Mathematics course with course number 115 or higher.</b>		3-4
Total Hours		3-4

Minimum Required Grade: C-

## Network Administration and Security Concentration Requirements

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
CSCI 215E	Social & Ethical Issues in CS	3
ITS 152	CCNA 2: Exploration	3
ITS 214	Network OS - Infrastructure	3
ITS 221	Project Management	3
ITS 222	Enterprise Security	3
ITS 250	CCNA 3: Exploration	3
ITS 274	Ethical Hacking and Network Defense	3
ITS 289	Professional Certification	1
ITS 298	Internship/Cooperative Educati	2
Total Hours		27

Minimum Required Grade: C-

## Legal Studies C.A.S.

This program is approved by the American Bar Association. The Paralegal Studies program prepares students for challenging and diverse careers in private law practices and in the law-related areas of business, industry, and government. The goals of the Paralegal Studies program are to enable students, through theoretical and practical legal education, to understand the function of law, to work as paralegals in the effective delivery of legal services, and to enhance the legal profession. This program is designed to equip students with skills to analyze legal issues and to perform a variety of activities including drafting legal documents, interviewing clients, conducting legal research, and preparing cases for trial. Students utilize current technology through Internet research and legal and general office software applications. Paralegal studies students receive the necessary legal training to take advantage of new career opportunities in all sectors of the economy. Students are exposed to the principles of legal ethics and are cautioned regarding restrictions against the unauthorized practice of law by laypersons. Paralegals may not provide legal services directly to the public, except as permitted by law.

## Certificate of Applied Science - Legal Studies

### Missoula College

**Degree Specific Credits:** 33

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	23
Directed Electives	10
Total Hours	33

### Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
COMX 111A	Introduction to Public Speaking	3
LEG 184E	Legal Ethics	3
LEG 185	Introduction Paralegal Studies	2
LEG 186	Introduction to Legal Research	2
LEG 187	Leg Res & Wrtg I	2
LEG 298	Paralegal Studies Internship	2
M 115	Probability and Linear Math	3
PSCI 210S	Intro to American Government	3
WRIT 101	College Writing I	3
Total Hours		23

Minimum Required Grade: C-

### Directed Electives

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 10 credits of the following courses:</b>		10
LEG 183	Contracts	2
LEG 188	Prin of Real Estate	2
LEG 189	Criminal Procedures	3
LEG 270	Civil Litigation	3
LEG 272	Computers & Law	2
LEG 282	Contemporary Legal Issues	3
LEG 283	Trial Preparation	3
LEG 285	Family Law	3
LEG 286	Legal Res & Writing II	3
LEG 287	Legal Res. & Writing III	2
LEG 288	Estate Administration	2
Total Hours		10

Minimum Required Grade: C-



## Medical Claims Specialist C.T.S.

### Michelle Boller, Director

Students are prepared academically and professionally for claim specialist positions in insurance organizations and healthcare facilities. In this fast-track program, students will learn foundational skills to:

- Understand medical terminology and human biology
- Understand medical benefit plans and the claims process to responsibly verify the accuracy and receipt of claims and the analysis of information for processing claims to promote accurate and prompt reimbursement
- Communicate professionally between peers, vendors, management, and customers in order to provide exceptional customer service
- Recommend claims action steps to promote accurate and prompt reimbursement
- Additionally graduates will work collaboratively with other team members to ensure the most positive service experience to both customers and vendors.

## Certificate of Technical Studies - Medical Claims Specialist

### Missoula College

**Degree Specific Credits:** 22

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Medical Claims Specialist Required Courses	22
Total Hours	22

### Medical Claims Specialist Required Courses

**Note:** Substitutions are approved at the discretion of the program director.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
AHMS 156	Medical Billing Fundamentals	3
AHMS 252	Computerized Medical Billing	3
BGEN 215	Career Readiness	3
BIOH 104N	Basic Human Biology	3
BIOH 105N	Basic Human Biology Lab	1
BMGT 245	Customer Service Management	3
HIT 265	Electronic Medical Records	3
Total Hours		22

Minimum Required Grade: C-

# Medical Information Technology A.A.S. - Health Information Coding Specialty

## Michelle Boller, Director

Health information coders play a critical role in accurately identifying procedures and diagnoses to ensure accurate billing and reimbursement. Students are trained to:

- Understand anatomy, medical terminology, and disease processes necessary to determine correct codes and sequences
- Analyze health records and to accurately abstract and code procedures and diagnoses utilizing legal and regulatory standards
- Communicate with physicians, healthcare facilities, insurance companies, and patients to ensure accurate and timely reimbursement

Graduates are adequately prepared for many roles, such as working in a front office with patients or behind the scenes with insurance companies and healthcare facilities. Upon graduation, students are encouraged and eligible to sit for AHIMA Certified Coding Associate (CCA) and Certified Coding Specialist (CCS) or AAPC Certified Professional Coder (CPC) certification exams to increase their employment opportunities.

## Associate of Applied Science - Medical Information Technology; Health Information Coding Concentration

### Missoula College

**Degree Specific Credits:** 62

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

## Summary

Core Courses	50
Coding Courses - Great Falls-MSU	12
Total Hours	62

## Core Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
AHMS 156	Medical Billing Fundamentals	3
AHMS 216	Pharmaceutical Products	3
AHMS 220	Medical Office Procedures	4
AHMS 252	Computerized Medical Billing	3
AHMS 270E	Medical Ethics	3
AHMS 298	Medical Info Internship	3
BGEN 215	Career Readiness	3
BIOH 104N	Basic Human Biology	3
BIOH 105N	Basic Human Biology Lab	1
CAPP 154	MS Word	3
COMX 115S	Introduction to Interpersonal Communications	3
CSCI 172	Intro to Computer Modeling	3
HIT 265	Electronic Health Records	3
M 105	Contemporary Mathematics	3
or M 115	Probability and Linear Mathematics	
PSYX 100S	Intro to Psychology	3
WRIT 101	College Writing I	3
Total Hours		50

Minimum Required Grade: C-

**Coding Courses - Great Falls-MSU**

## University Of Montana

**Note:** AHMS 160, 164, 212, and 213 are taken through Great Falls College-MSU. Students must also take AHMS 201 at Great Falls College-MSU in order to register for AHMS 160 and 164. See program director for coding course information.

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
AHMS 160	Beginning Procedural Coding	3
AHMS 164	AHMS 164 Beginning Diagnosis Coding: ICD-10	3
AHMS 212	CPT Coding	3
AHMS 213	ICD-10 CODING	3
Total Hours		12

Minimum Required Grade: C-

# Medical Information Technology A.A.S. - Medical Administrative Assisting

## Michelle Boller, Director

Medical administrative assistants are critical to a healthcare facility. They are the first person a patient talks to or meets when they come in for care. This program offers students a career in this fascinating and high-demand medical field. According to the Bureau of Labor Statistics, positions in these medical areas are expected to increase over 20 percent in the next several years.

In the first year of this program students will receive the Medical Reception certificate. Upon completion, students will continue to develop skills to:

- Effectively and confidentially communicate with patients, maintain patient records, schedule appointments, and transcribe letters and patient chart notes
- Post charges and payments and submit insurance claims using current coding procedures
- Create and update the office procedures manual, assist in improving work flow and office efficiencies, and supervise and communicate with office personnel

Graduates are prepared for employment in clinics, hospitals, private practices, insurance companies, and work-at-home opportunities. Students successfully completing the program are awarded the Associate of Applied Science degree. Students may enter either Autumn or Spring semester.

## Associate of Applied Science - Medical Information Technology; Medical Administrative Assisting Concentration

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

## Summary

Core Courses	60
Total Hours	60

## Core Courses

**Note:** Substitutions are approved at the discretion of the program director.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
AHMS 144	Medical Terminology	3
AHMS 156	Medical Billing Fundamentals	3
AHMS 216	Pharmaceutical Products	3
AHMS 220	Medical Office Procedures	4
AHMS 252	Computerized Medical Billing	3
AHMS 270E	Medical Ethics	3
AHMS 298	Medical Info Internship	3
BGEN 215	Career Readiness	3
BIOH 104N	Basic Human Biology	3
BIOH 105N	Basic Human Biology Lab	1
BMGT 245	Customer Service Management	3
CAPP 154	MS Word	3
COMX 111A	Introduction to Public Speaking	3
COMX 115S	Introduction to Interpersonal Communications	3
CSCI 172	Intro to Computer Modeling	3
HIT 265	Electronic Health Records	3
M 105	Contemporary Mathematics	3
or M 115	Probability and Linear Mathematics	
PSYX 100S	Intro to Psychology	3

University Of Montana

WRIT 101	College Writing I	3
Total Hours		60

Minimum Required Grade: C-



## Medical Reception C.A.S.

### Michelle Boller, Director

The Medical Reception Certificate prepares students with the required skills to provide exceptional service to patients in a medical setting, ranging from private practice receptionists to hospital ward secretaries. Students learn how to perform essential duties including:

- Greeting patients, scheduling appointments, screening telephone calls, obtaining and entering patient registration information, releasing appropriate medical information, maintaining medical records, and managing patient flow
- Understanding the financial transactions of a practice with a clear understanding of all the activities in the billing and collection cycle
- Applying foundational knowledge of medical law and the principles of medical ethics as well as the guidelines established by HIPAA.

Upon completion of the program, students receive a Certificate of Applied Science and will be prepared to work as receptionists in healthcare facilities and physician offices.

## Certificate of Applied Science - Medical Reception

### Missoula College

**Degree Specific Credits:** 31

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Medical Reception Required Courses	31
Total Hours	31

### Medical Reception Required Courses

**Note:** Substitutions are approved at the discretion of the program director.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
AHMS 144	Medical Terminology	3
AHMS 156	Medical Billing Fundamentals	3
AHMS 220	Medical Office Procedures	4
AHMS 252	Computerized Medical Billing	3
AHMS 270E	Medical Ethics	3
CAPP 154	MS Word	3
COMX 115S	Introduction to Interpersonal Communications	3
M 105	Contemporary Mathematics	3
WRIT 101	College Writing I	3
Total Hours		31

Minimum Required Grade: C-

## Paralegal Studies A.A.S.

This program is approved by the American Bar Association. The Paralegal Studies program prepares students for challenging and diverse careers in private law practices and in the law-related areas of business, industry, and government. The goals of the Paralegal Studies program are to enable students, through theoretical and practical legal education, to understand the function of law, to work as paralegals in the effective delivery of legal services, and to enhance the legal profession. This program is designed to equip students with skills to analyze legal issues and to perform a variety of activities including drafting legal documents, interviewing clients, conducting legal research, and preparing cases for trial. Students utilize current technology through Internet research and legal and general office software applications. Paralegal studies students receive the necessary legal training to take advantage of new career opportunities in all sectors of the economy. Students are exposed to the principles of legal ethics and are cautioned regarding restrictions against the unauthorized practice of law by laypersons. Paralegals may not provide legal services directly to the public, except as permitted by law.

### Associate of Applied Science - Paralegal Studies

#### Missoula College

**Degree Specific Credits:** 65

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** This is a two year/four semester in-step degree. If classes are taken out of sequence, additional semesters are required for graduation. Also note, courses with the LEG prefix (legal specialty) are only offered in the semester indicated. See Program Director for scope and sequence advising. Please refer to online schedule for online course availability.

### Summary

Paralegal Studies Required Courses	71
Total Hours	71

### Paralegal Studies Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	4

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BMGT 212	Critical Analysis for Business	3
COMX 111A	Introduction to Public Speaking	3
LEG 183	Contracts	2
LEG 184E	Legal Ethics	3
LEG 185	Introduction Paralegal Studies	2
LEG 186	Introduction to Legal Research	2
LEG 187	Leg Res & Wrtg I	2
LEG 188	Prin of Real Estate	2
LEG 189	Criminal Procedures	3
LEG 270	Civil Litigation	3
LEG 272	Computers & Law	2
LEG 282	Contemporary Legal Issues	3
LEG 283	Trial Preparation	3
LEG 285	Family Law	3
LEG 286	Legal Res & Writing II	3
LEG 287	Legal Res. & Writing III	2
LEG 288	Estate Administration	2
LEG 298	Paralegal Studies Internship	2
M 105	Contemporary Mathematics	3
PSCI 210S	Intro to American Government	3
PSYX 100S	Intro to Psychology	3
or BMGT 235	Management	
SOCI 101S	Introduction to Sociology	3
WRIT 101	College Writing I	3

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Total Hours	65
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Minimum Required Grade: C-

## Sales and Marketing Certificate

Marketing is a vital function of any organization. The objective is to market and effectively sell products or services to sustain itself, whether for profit or not-for-profit. Opportunity is limitless, the job is never boring, you work with people, and jobs are in demand. You will train in professional sales, learn and practice exceptional customer service, and understand the psychology of selling to assist clients in meeting needs and solving problems. The curriculum also involves marketing activities, bookkeeping functions, and merchandising skills. Successful marketing and sales professionals are creative, self-motivated, optimistic, work well in team environments, are organized and detail-minded.

## Certificate of Applied Science - Sales and Marketing

### Missoula College

**Degree Specific Credits:** 30

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for advising regarding scope and sequence, course prerequisites, and math and writing placement assessments.

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### Summary

Sales and Marketing Required Courses	30
Total Hours	30

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### Sales and Marketing Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
ACTG 101 or ACTG 201	Accounting Procedures I	3
BGEN 105S	Introduction to Business	3
BGEN 215	Career Readiness	3
BMKT 112	Applied Sales	3
BMKT 225	Marketing	3
COMX 111A	Introduction to Public Speaking	3
CSCI 172	Intro to Computer Modeling	3
ECNS 201S	Microeconomics	3
M 115	Probability and Linear Mathematics	3
WRIT 101	College Writing I	3
Total Hours		30

Minimum Required Grade: C-

## Health Professions Department

### Ginger Sillars, Chair

The Health Professions Department of Missoula College-University of Montana prepares students to become competent, caring, ethical professionals and provides the skills and opportunities to jump-start careers in healthcare.

The ideal Health Professions student is one who thinks critically and independently, who cares about others, whose behavior is guided by ethical values, and who is prepared for lifelong learning and leadership in their profession.

Six degree programs are offered:

- Registered Nursing (A.S.)
- Surgical Technology (A.A.S.)
- Respiratory Care (A.A.S.)
- Radiologic Technology (A.A.S.)
- Medical Assisting (A.A.S.)
- Paramedicine (A.A.S.)

These programs share many pre-requisite courses, employ an inter-professional model of learning, and all make use of clinical rotations. During these rotations, students work at healthcare facility partners alongside licensed professionals, with real patients, to develop their skills and confidence.

Admission to each program requires a separate application and can be competitive, so it is important to meet with an advisor early and learn more about your chosen field of study and how to succeed.

## Associates Degrees

- Medical Assisting A.A.S.
- Paramedicine A.A.S.
- Radiologic Technology A.A.S.
- Registered Nursing A.S.
- Respiratory Care A.A.S.
- Surgical Technology A.A.S.

## Certificates

- Advanced Medical Imaging Certificate



## Advanced Medical Imaging Certificate

The five-credit Advanced Medical Imaging Certificate fulfills the American Registry of Radiologic Technologists certification requirements and is available to registered and licensed radiologic technologists and current Missoula College radiology students.

For more information, please call:

Administrative Assistant, Health Professions - 406-243-7868

Dan Funsch - Program Director, Radiologic Technology - dan.funsch@mso.umt.edu

## Certificate of Completion - Advanced Medical Imaging

### Missoula College

**Degree Specific Credits:** 5

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Advanced Medical Imaging Required Courses	5
Total Hours	5

### Advanced Medical Imaging Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHXR 274	Cross Sectional Anatomy	3
AHXR 275	Physics and Instrumentation	2
Total Hours		5

Minimum Required Grade: B

## Medical Assisting A.A.S.

Students in Medical Assisting are cross-trained with skills and knowledge in front office administrative, clinical, and limited laboratory procedures that are designed to assist healthcare practitioners in administering to the needs of patients. Selected administrative skills include scheduling, medical office accounting systems, medical coding and billing, and electronic medical records. Some of the clinical skills the student will learn include assisting with medical examinations, vital signs, administering medications and injections (under supervision), sterilizing instruments and electrocardiography. Laboratory skills will include venipuncture (under supervision), and performing selected CLIA-waived laboratory tests. Additionally, Medical Assisting students will become acquainted with the laws and regulations governing medicine in the ambulatory setting, as well as ethical issues being confronted in the health care arena. The program is designed to prepare the student for an entry-level position in Medical Assisting.

Students may apply for admission by meeting with the program director. Prior to entry, the student must be able to show competency in computers. Each Spring students will have to provide documentation of vaccines, background check, etc. as posted on the program's web page. Because some classes are only offered in a specific semester, plus some courses have pre-requisites or co-requisites, meeting with the program director before each semester is necessary to avoid problems.

Students must earn a C or better in all courses in order to progress and complete the program. This includes being able to pass 100% of psychomotor and affective competencies required in laboratory/procedure courses. A course may be attempted a maximum of two times. At the end of the program the student will perform a 200-hour externship/practicum in an ambulatory facility, such as a clinic or doctor's office. The site must be approved by the Program Director. This provides the student with the opportunity to apply the knowledge and skills learned in a real world setting. Students successfully completing the program will be awarded an Associate of Applied Science degree.

Graduates are encouraged and prepared to take the Registered Medical Assisting exam upon graduation

## Associate of Applied Science - Medical Assisting

### Missoula College

**Degree Specific Credits:** 63

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** A minimum of a C in each Medical Assisting core course is required for graduation. Medical Assisting core courses must be completed in no more than 2 attempts. The student must show competence in computer applications to enter the Medical Assisting program.

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## Summary

## University Of Montana

Core Courses	63
Total Hours	63

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### Core Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 101	Accounting Procedures I	3
AHMA 201	Med Asst Clinical Prcdrs I	4
AHMA 203	Med Asst Clinical Prcdrs II	4
AHMA 280	Medical Assisting Exam Prep	3
AHMA 298	Medical Assisting Externship	5
AHMS 144	Medical Terminology	3
AHMS 156	Medical Billing Fundamentals	3
AHMS 216	Pharmaceutical Products	3
AHMS 220	Medical Office Procedures	4
AHMS 252	Computerized Medical Billing	3
AHMS 270E	Medical Ethics	3
BGEN 215	Career Readiness	3
BIOH 108	Basic Anatomy	4
CAPP 154	MS Word	3
COMX 115S	Introduction to Interpersonal Communications	3
HIT 265	Electronic Health Records	3
M 105	Contemporary Mathematics	3
or M 115	Probability and Linear Mathematics	
PSYX 100S	Intro to Psychology	3
WRIT 101	College Writing I	3
Total Hours		63

Minimum Required Grade: C

## Paramedicine A.A.S.

The Paramedicine Associate of Applied Science program at Missoula College prepares students to provide emergency medical care to victims of illness, accident, or injury, assessing patients and performing critical medical interventions. As members of the allied healthcare team, Paramedics work as part of a comprehensive EMS response, applying their advanced knowledge of human anatomy and physiology to provide advanced life support care to patients.

The primary goal of the Missoula Paramedic Program is to prepare competent entry-level Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

Paramedics are employed by ambulance services, fire departments, within hospitals, and as members of emergency flight crews. They employ life-saving strategies such as managing airways, establishing vascular access, performing CPR, and administering pharmaceuticals, often while transporting patients to critical care facilities. Students who demonstrate a commitment to life-long learning, civic engagement, and service to their communities are invited to apply.

Missoula College's Paramedicine program is delivered through a community partnership with Missoula Emergency Services, Inc. (MESI), which has been training paramedics since the 1980s. The program is a candidate for Accreditation by the Committee on Accreditation of Educational Programs for EMS Professions (CoAEMSP) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Admission to the program is competitive and requires prior completion of 16 credits of pre-requisite coursework as well as a current NREMT Certification. The program's core classes begin every autumn semester and include 57 credits of classroom and laboratory instruction as well as hundreds of hours of experiential, hands-on clinical training within hospitals and aboard ambulances.

Student progress is evaluated in the classroom through testing of cognitive knowledge and in labs and clinical rotations through observation of the technical and psychomotor skills used in the profession. The program maintains high standards of ethical and professional behavior. Upon graduating, the student qualifies for an examination administered by the National Registry of Emergency Medical Technicians (NREMT), successful completion of which earns a national certification and allows the individual to practice in all states.

## Associate of Applied Science - Paramedicine

### Missoula College

**Degree Specific Credits:** 73

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** See Program Director for course prerequisites before applying to program.

## Summary

Pre-Requisite Courses	16
Core Courses	57
Total Hours	73

## Pre-Requisite Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
BIOH 108	Basic Anatomy	4
COMX 115S	Introduction to Interpersonal Communications	3
M 105	Contemporary Mathematics	3
WRIT 101	College Writing I	3
Total Hours		16

Minimum Grade: C-

## Core Courses

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECP 200	Transition to Paramedic Care	3
ECP 201	Paramedic Fundamentals	3
ECP 202	Paramedic Fundamentals Lab	1
ECP 206	EMS Case Studies	4
ECP 207	Cardiology	4
ECP 208	Cardiology Lab & ACLS	1
ECP 216	Hospital Clinical I	5
ECP 220	Special Considerations	1
ECP 221	OB/Neonate/Pediatrics	2
ECP 222	OB/Neonate/Pediatric Lab/PALS/Stable	1
ECP 230	Trauma	2
ECP 232	Pulmonary	2
ECP 233	Trauma/Pulmonary Lab & PHTLS	1
ECP 242	Medical Considerations	2
ECP 243	Medical Lab	1
ECP 246	Hospital Clinical II	6
ECP 247	Hospital Clinical III	6
ECP 250	NREMT Exam Preparation	3
ECP 251	NREMT Exam Preparation Lab	1
ECP 298	Internship	8
Total Hours		57

Minimum Grade: C-

# Radiologic Technology A.A.S.

## Daniel Funsch, Director

A Radiologic Technologist (Radiographer) uses critical thinking and independent judgment to obtain diagnostic medical images while providing quality patient care and minimizing radiation exposure. Technologists are employed in acute care settings, ambulatory care settings, physicians offices, in education, and in management or sales positions. With additional education and training, radiographers may be employed in radiation therapy, computed tomography, mammography, magnetic resonance imaging, diagnostic medical ultrasound, nuclear medicine, special vascular imaging, and cardiac catheterization.

The Radiologic Technology program is approved by the American Registry of Radiologic Technologists (ARRT) and accredited by the Northwest Association of Schools and Colleges. When all requirements for the associate of applied science degree are completed, the student will be eligible to take the national certification examination administered by the American Registry of Radiologic Technologists. Upon successful completion of this examination, the student becomes a Registered Radiologic Technologist, R.T. (R) ARRT.

## Program Requirements

The Associate of Applied Science in Radiologic Technology requires students to successfully complete the Pre-Radiology prerequisite courses prior to applying to the program. Students admitted to the University of Montana may enroll in the Pre-Radiology prerequisite courses. Once accepted into the program, students will complete the A.A.S. in 16 months, graduating at the end of the second fall semester.

**Students must pass BIOH 201N with a minimum grade of B and have a minimum cumulative GPA of 2.75 in all course work, including prerequisite courses, to apply to the Radiologic Technology program. A course may be attempted a maximum of two times.** As some courses are offered autumn or spring semester only, it is important to obtain advising with the Program Director or Clinical Coordinator each semester prior to registration.

Application to the program is required spring semester in the year prior to the autumn semester program start. Students may apply while enrolled in the Pre-Radiology prerequisite courses with acceptance to the program to be determined after spring grades are finalized. Students who apply twice to the program and are not accepted are strongly encouraged to contact Career Services for counseling toward another degree.

The program classes begin autumn semester each year with the majority of classroom courses completed in the first two semesters. Clinical education will begin at the end of the first semester. A twelve-week summer session between the first and second years includes clinical rotations of 400 hours (40 hours/week for 10 weeks). The autumn semester of the second year also requires 400 hours of clinical instruction.

Students entering the program are required to rotate to clinical sites outside the Missoula area on a periodic basis. These rotations will take place during any term or session beginning the spring semester of the program. These sites may include, but are not limited to, Ronan, Hamilton, Plains, and Polson, Montana. Transportation and housing are the student's responsibility.

## Associate of Applied Science - Radiologic Technology

### Missoula College



**Degree Specific Credits: 74**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** Students must complete the pre-requisite core before applying to the Radiologic Technology Program or be in the process of completing the pre-requisite core during the Spring Semester. Applications are due on or around April 1st.

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## Summary

Prerequisite Courses	20
Pre- or Co-requisite Courses	6
Radiologic Technology Courses	48
Total Hours	74

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## Prerequisite Courses

**Note:** These courses are taken before applying to the Radiologic Technology program. Along with BIOH 201N, students must register for the BIOH 202N lab section. These must be passed with a minimum grade of B . Students must also have a minimum cumulative GPA of 2.75 in all course work including prerequisite courses to apply to the Radiologic Technology program.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
BIOH 201N	Human Anatomy and Physiology I (equiv 301) (minimum grade of B)	4
BIOH 211N	Human Anatomy and Physiology II (equiv 311) (minimum grade of C)	4
M 115 or M 121	Probability and Linear Mathematics or College Algebra	3
PHSX 105N or CHMY 121N	Fundamentals of Physical Science or Introduction to General Chemistry	3
WRIT 101 or WRIT 121	College Writing I or Intro to Technical Writing	3
Total Hours		20

Minimum Required Grade: C-

### Pre- or Co-requisite Courses

**Note:** These courses can be taken either before applying or after being accepted into the program through the application process.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 270E	Medical Ethics	3
COMX 115S or PSYX 100S	Introduction to Interpersonal Communications or Intro to Psychology	3
Total Hours		6

### Radiologic Technology Courses

**Note:** These courses cannot be taken unless accepted into the program through the application process.

- AHXR 195 is taken Autumn Semester first year at 1 credit and Spring Semester at 4 credits.

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- AHXR 295 is taken Summer Semester at 12 credits and Autumn Semester second year at 10 credits.
- For AHXR courses the minimum grade is a B.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHXR 101	Patient Care in Radiology	2
AHXR 121	Radiographic Imaging I	4
AHXR 140	Radiographic Methods	4
AHXR 141	Radiology Lab	1
AHXR 160	Radiographic Methods II	3
AHXR 161	Radiographic Methods II Lab	1
AHXR 195	Radiographic Clinical: I - II	5
AHXR 221	Radiographic Imaging II	2
AHXR 225	Radiobiology/Radiation Protctn	2
AHXR 270	Radiographic Registry Review	2
AHXR 295	Radiographic Clinical: III - IV	22
Total Hours		48

Minimum Required Grade: B

## Registered Nursing A.S.

### **Linda Barnes, Nursing Program Director**

The Associate of Science in Nursing (A.S.N.) requires four semesters of full-time study. Applicants to the program must have completed all pre-nursing prerequisites, have a cumulative GPA of at least 2.75 (last 60 credits only), and have received a B or better in BIOH 201/202.

Admission to the program requires completion of the application which can be obtained on the Missoula College Health Professions webpage. The number of students accepted into the A.S.N. program is limited to 18 students in Autumn semester and 18 students in Spring semester. All candidates who meet the admission requirements will be considered. Students learn Registered Nursing skills through independent study, lectures, simulations, demonstrations, and advanced skills practice in the nursing lab. Under instructor supervision and preceptorship, students also provide patient care in a variety of acute care settings.

The A.S.N. degree program is approved by the State Board of Nursing (301 South Park, Helena, MT 59601). The program is accredited by the Accreditation Commission for the Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326).

Students must provide proof of having met the following requirements to the Nursing Program Administrative Associate on or before the first day of class:

1. Two step Tuberculosis testing using the PPD (Purified Protein Derivative) or chest x-ray (positive results will require a physician's letter before a student can continue in clinical settings);
2. Hepatitis B vaccine and titer: The three injection Hepatitis B series must be started on or before acceptance into the program so the series is completed by the time clinical begins;
3. Measles, mumps, and rubella (MMR) immunization (for those born before 1956, it is not required to have an MMR, but a titer must be completed);
4. Influenza Vaccination;
5. Varicella (Chicken Pox) Vaccination;
6. Basic Life Support (BLS) training Healthcare Provider;
7. Criminal Background Check, including Sexual Offender Registry

Many licensing bodies and employing institutions in health care have increasingly stringent requirements and background checks as conditions for licensing or employment. If a student has concerns about this, she/he should contact the licensing board for nursing.

## Associate of Science - Registered Nursing

### Missoula College

**Degree Specific Credits:** 73-74

**Required Cumulative GPA:** 2.0

## Catalog Year: 2021-22

**Note:** Students must pass all NRSNG courses with a minimum grade of a B. It is highly recommended that students have completed BIOH 211N/BIOH 212N, SOCI 101S, PSYX 100S, BIOM 250N, and BIOM 251 prior to admission to the program.

## Summary

Registered Nursing Required Courses	67
Writing Requirement	3
Mathematics Requirement	3-4
Total Hours	73-74

## Registered Nursing Required Courses

**Note:** Students must pass all Nursing (rubric NRSNG) courses with a minimum grade of 'B.'

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 201N	Human Anat Phys I (equiv 301)	4
BIOH 211N	Human Anat Phys II (equiv 311)	4
BIOM 250N	Microbiology for Hlth Sciences	3
BIOM 251	Microbiology Hlth Sciences Lab	1
CHMY 121N	Introduction to General Chemistry	4
CHMY 122	Introduction to General Chemistry Lab	1
NRSNG 230	Nursing Pharmacology	3
NRSNG 231	Nursing Pharmacology Lab	2
NRSNG 232	Foundations of Nursing	3
NRSNG 233	Foundations of Nursing Lab	3

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NRSG 234	Adult Nursing I	3
NRSG 235	Adult Nursing I Clinical	2
NRSG 236	Health and Illness of Maternal Nursing	2
NRSG 237	Health and Illness of Maternal Nursing Clinical	1
NRSG 244	Adult Nursing II	3
NRSG 245	Adult Nursing II Clinical	2
NRSG 246	Health and Illness of Child and Family Nursing	2
NRSG 247	Health and Illness of Child and Family Nursing Clinical	1
NRSG 254	Mental Health Concepts	3
NRSG 255	Mental Health Concepts Clinical	1
NRSG 256	Pathophysiology	3
NRSG 259	Adult Nursing III	3
NRSG 260	Adult Nursing III Lab	1
NRSG 261	Adult Nursing III Clinical	2
NRSG 266	Managing Client Care for the Registered Nurse	2
NRSG 267	Managing Client Care for the Registered Nurse Clinical	2
PSYX 100S	Intro to Psychology	3
SOCI 101S	Introduction to Sociology	3
Total Hours		67

Minimum Required Grade: C-

## Writing Requirement

**Note:** Students who have completed WRIT 101, greater than ten years prior to applying to the Missoula College must take the Writing Placement test. If the score on the test places the student in WRIT 101, the transfer credits will be accepted for the nursing program requirements. If the student places below the required standard, then they shall remediate as needed prior to application to the nursing program. All students need to take WRIT 101 for the nursing program.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
WRIT 101	College Writing I	3
Total Hours		3

Minimum Required Grade: C-

## Mathematics Requirement

**Note:** M 121 is the recommended math. Courses that substitute for M 121 can be Probability and Linear Math, Pre-calculus with Algebra, or Pre-calculus with Trig , or Calculus. Mathematics and Writing prerequisite coursework should have been completed no more than 10 years prior to application to any specific health professions program. If mathematics and writing prerequisite coursework is greater than 10 years old, the student should take the writing and mathematics placement exams administered by the college (e-write and ALEX respectively). If the student places into a comparable level to the specific course in question then that course shall be accepted as a valid prerequisite for the intended program. If the student places below the required standard then they shall remediate as needed prior to application to the nursing program.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 115	Probability and Linear Mathematics	
M 121	College Algebra (recommended)	
M 151	Precalculus	
M 171	Calculus I	
Total Hours		3-4

Minimum Required Grade: C-

# Respiratory Care A.A.S.

## **Paul J. Crockford, Med, RRT, Program Director**

Respiratory Care is an allied health specialty. It is an important part of modern medicine and health care. Respiratory Care encompasses the care of patients with respiratory problems in the hospital, clinic, and home.

Respiratory therapists, as members of a team of health care professionals, work to evaluate, treat, and manage patients of all ages with respiratory illnesses and other cardiopulmonary disorders in a wide variety of clinical settings. Respiratory therapists must behave in a manner consistent with the standards and ethics of all health care professionals. In addition to performing respiratory care procedures, respiratory therapists are involved in clinical decision-making (such as patient evaluation, treatment selection, and assessment of treatment efficacy) and patient education. The scope of practice for respiratory therapist includes, but is not limited to:

- acquiring and evaluating clinical data;
- assessing the cardiopulmonary status of patients;
- performing and assisting in the performance of prescribed diagnostic studies, such as drawing blood samples, performing blood gas analysis, pulmonary function testing, and applying adequate recording electrodes using polysomnographic techniques;
- utilizing data to assess the appropriateness of prescribed respiratory care;
- establishing therapeutic goals for patients with cardiopulmonary disease;
- participating in the development and modification of respiratory care plans;
- case management of patients with cardiopulmonary and related diseases;
- initiating ordered respiratory care, evaluating and monitoring patients' responses to such care, modifying the prescribed respiratory therapy and cardiopulmonary procedures, and life support endeavors to achieve desired therapeutic objectives;
- initiating and conducting prescribed pulmonary rehabilitation;
- providing patient, family, and community education;
- promoting cardiopulmonary wellness, disease prevention, and disease management;
- participating in life support activities as required; and
- promoting evidence-based medicine, research, and clinical practice guidelines.

Starting salaries are excellent with premiums paid for evening, night, and weekend shifts. Jobs are plentiful throughout the United States. Graduates are eligible to take the credentialing examinations, administered by the National Board for Respiratory Care (NBRC), which include the Therapist Multiple Choice (TMC) examination and the Clinical Simulation Examination (CSE). Upon successfully achieving the designated Low Cut score, the candidate is awarded the Certified Respiratory Therapist credential. When the candidate successfully achieves the High Cut score, instead of the Low Cut score, on the TMC, they are eligible to take



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the CSE. Once the CSE is successfully passed, the candidate is awarded the Registered Respiratory Therapist (RRT) credential. Licensure requirements in the state of Montana are met by successful achievement of the Certified Respiratory Therapist (CRT) credential.

The goal of the program is, "To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) domains of respiratory care practice as performed by registered respiratory therapists (RRTs)" CoARC standard 3.01.

The program is 4 semesters in length which includes the AA prerequisite courses and a summer session. The Respiratory Care Program at The University of Montana Missoula College, is accredited by the Commission on Accreditation for Respiratory Care ([www.coarc.com](http://www.coarc.com)), 264 Precision Boulevard, Telford, Tennessee 37690.. Graduates receive the degree of Associate of Applied Science in Respiratory Care.

Students accepted to the program are required to rotate to clinical sites outside the Missoula area on a periodic basis. These rotations take place during the spring semester, summer session and autumn semester of the second year. These sites may include, but are not limited to: Kalispell, Ronan, Plains, Butte, Billings, Hamilton, Helena, and Coeur d Alene, Idaho. Transportation and housing are the student's responsibility.

## Associate of Applied Science - Respiratory Care

### Missoula College

**Degree Specific Credits:** 71

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** It is preferred that students have the prerequisite core completed by the end of the semester in which they intend to apply to the program (i.e. applying to the program in the spring and completing the core by the end of that spring semester.) However, those students who anticipate completing the core by the end of the summer semester are still encouraged to apply in the spring and may be granted provisional acceptance.

### Summary

Pre- Respiratory Care Prerequisite Courses	23
Respiratory Care Courses	48
Total Hours	71

### Pre- Respiratory Care Prerequisite Courses

**Note:** Must be completed or be in the process of completing when applying to the program. A minimum GPA of 2.75 for prerequisite courses is required in order to apply to the program.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOH 201N	Human Anat Phys I (equiv 301)	4
BIOH 211N	Human Anat Phys II (equiv 311)	4
COMX 115X	Introduction to Interpersonal Communication	3
M 115	Probability and Linear Mathematics	3
PSYX 100S	Intro to Psychology	3
PHSX 105N	Fundamentals of Physical Science	3
WRIT 121	Intro to Technical Writing	3
Total Hours		23

Minimum Required Grade: C-

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## Respiratory Care Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHRC 101	Communication Management	1
AHRC 129	Patient Care & Assessment	4
AHRC 131	Resp Care Fundamentals I	5
AHRC 132	Respiratory Care Fundamentals II	3
AHRC 150	Respiratory Care Lab I	1
AHRC 231	Resp Crit Care	4
AHRC 232	Resp Path & Disease	3
AHRC 235	Cardiopulm Anat & Phys	3
AHRC 243	Perinat & Pediat Res Care	3
AHRC 250	Respiratory Care Lab II	2
AHRC 252	Respiratory Care Review	2
AHRC 255	Clinical Experience I	4
AHRC 260	Resp Care Lab III	1
AHRC 265	Clinical Experience II	5
AHRC 270	Resp Care Lab IV	1
AHRC 275	Clinical Exp III	6
Total Hours		48

Minimum Required Grade: B-

## Surgical Technology A.A.S.

### **Jill Davis, Director**

The Surgical Technology program is designed to prepare the student for employment as a surgical technologist, an integral member of the team of medical practitioners providing surgical care to patients.

Surgical technologists work under the supervision of a surgeon to facilitate the safe and effective conduct of invasive surgical procedures. They ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

Surgical technologists possess expertise in the theory and application of sterile and aseptic technique and combine the knowledge of human anatomy, surgical procedures, and implementation of instrumentation and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

Students admitted to the University of Montana enter as Associate of Arts (AA) General Studies majors with an emphasis in the program of their choice. Students must select the specific prerequisite courses required for their chosen area of study after meeting with the program advisor. Students must apply to the program by October 1 of each year. Students may apply while enrolled in the A.A. prerequisite courses with acceptance to the program to be determined after the autumn semester grades are finalized. BIOH 201N/202N (Anatomy and Physiology I and lab) must be passed with a grade of B (3.0) and be a face-to-face course. The program-specific courses begin spring semester.

Once accepted to the program, a student must complete each Surgical Technology-specific course (those courses with an AHST) with a minimum grade of C' (80%) in order to continue in the ST program. Course grading scales may vary. If a student does not pass the required courses, he/she will not be able to continue in the program and will need to apply for readmission. If a student is re-admitted, he/she will be required to complete skills labs, AHST 115 and AHST 215, to ensure sterile technique skills are acceptable for patient care. A student may take any required course a maximum of two (2) times. A student may apply to the program a maximum of two (2) times.

A student will become a member of the Association of Surgical Technologists during the first year in the program. A student anticipating program completion will take the National Certification Exam prior to graduation. A student who successfully completes the ST program is awarded an A.A.S. degree in Surgical Technology. The credential of Certified Surgical Technologist (CST) will be awarded to a student upon passing the National Certification Exam and graduation from the ST program. This credential is awarded by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Students are required to rotate sites during the clinical portion of their education, which may include rural, critical access facilities. During the final semester of the program, internships may be arranged outside the Missoula area. Transportation and housing are the student's responsibility. Prior to entering a healthcare facility for clinical experiences, a student will be required to submit a background check and complete a drug screening. Many healthcare facilities have increasingly stringent requirements. A student may be refused entry into a clinical facility based on information disclosed in the background check. If this is a concern for you, please consult the Program Director. If a student is denied agency access based on the background check, there will be no placement at an alternate site, and the subsequent inability of the student to complete the clinical education will result in inability to continue in the Surgical Technology program.

## University Of Montana

The University of Montana-Missoula College Surgical Technology Program has discontinued its satellite programs in Butte and Billings. Interested students can still apply for a slot in the Missoula-based program with an application deadline of October 1.

The Surgical Technology program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP), 25400 U. S. Highway 19 North; Suite 158; Clearwater, FL 33763 ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC-STSA), 6 West Dry Creek Circle Suite 110 Littleton, CO 80120 ([www.arcstsa.org](http://www.arcstsa.org)).

## Associate of Applied Science - Surgical Technology

### Missoula College

**Degree Specific Credits:** 61

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** It is preferred that students have the prerequisite core completed by the end of the semester in which they intend to apply to the program (i.e. applying to the program in the fall semester and completing the core by the end of that fall semester.) CAPP 120 may be challenged by testing out. BIOM 250N and AHMS 270E may be taken prior to applying.

### Summary

Surgical Technology Prerequisite Courses	16
Surgical Technology Courses	48
Total Hours	64

### Surgical Technology Prerequisite Courses

**Note:** Along with BIOH 201N, students must register for the BIOH 202N lab section. These must be passed with a minimum grade of B.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 144	Medical Terminology	3
BIOH 201N	Human Anat Phys I (equiv 301) (must be passed with a minimum of a B)	4
M 105	Contemporary Mathematics	3
PSYX 100S	Intro to Psychology	3
WRIT 121	Intro to Technical Writing	3
or WRIT 101	College Writing I	
Total Hours		16

Minimum Required Grade: C-

### Surgical Technology Courses

**Note:** Along with BIOH 211N, students must register for the BIOH 212N lab section.

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
AHMS 270E	Medical Ethics	3
AHST 101	Introduction to Surgical Techn	3
AHST 115	Surgical Lab I	2
AHST 154	Surgical Pharmacology	3
AHST 200	Operating Room Techniques	5
AHST 201	Surgical Procedures I	4
AHST 202	Surgical Procedures II	5
AHST 215	Surgical Lab II	2
AHST 250	Surgical Clinical I	4
AHST 251	Surgical Clinical II	5
AHST 298	Surgical Internship	5
BIOH 211N	Human Anat Phys II (equiv 311)	4
BIOM 250N	Microbiology for Hlth Sciences	3
Total Hours		48

Minimum Required Grade: C

## Industrial Technology Department

The mission of the Department of Industrial Technology is to provide the regional workforce with credentialed, skilled, and competent entry-level technicians and to be responsive to emerging workforce needs. The department encourages the development of teamwork and interpersonal communication skills required in the workplace. It also stresses the importance of a strong work ethic and the value of continuing education and lifelong learning. The instruction for the Department of Industrial Technology Certificate of Applied Science and Associate of Applied Science (A.A.S.) degree programs are primarily delivered at the West Campus at 2795 37th Avenue, Missoula MT 59804. Some instruction is delivered at the River Campus or Mountain Campus.

All students admitted to Industrial Technology programs are required to submit writing placement scores immediately upon admission to the Missoula College or make arrangements to take these assessments as soon as possible. Thereafter, students needing to take a writing assessment should contact the Academic Support Center at 406-243-7826 to schedule an appointment to take the placement assessments as soon as possible. Students who live outside of the Western Montana area may take a writing assessment at their local community college.

### Associates Degrees

- Diesel Technology A.A.S.
- Sustainable Construction Technology A.A.S.
- Welding Technology A.A.S.

### Certificates

- Engineering Technology Certificate
- Heavy Equipment Operation Certificate
- Precision Machine Technology Certificate
- Green Building Certificate
- Carpentry Certificate
- Construction Management Certificate
- Welding Technology Certificate
- Construction Helper Certificate
- Precision Machine Technology Technical Certificate



## Carpentry C.A.S.

This one-year certificate in Carpentry is for students looking to obtain a hands-on working knowledge of basic carpentry skills. Students will get instruction and practice in entry-level skills, including site preparation and layout, concrete forming and placement, residential framing, roofing, siding, and window installation.

### Certificate of Applied Science - Carpentry

#### Missoula College

**Degree Specific Credits:** 34

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

Required Courses	34
Total Hours	34

#### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 102	Interpersonal Skills in the Workplace	1
CSTN 120	Carpentry Bscs & Rough-In Frmg	5
CSTN 122	Beginning Carpentry Lab	5
CSTN 142	Int & Ext Finish Carpentry	4
CSTN 143	Intermediate Carpentry Lab	4
CSTN 171	Site Prep, Found, Concrete Ins	3
M 111	Technical Mathematics	3
OSH 130	OSHA 130 Industrial Trades Safety Training	3
WRIT 101	College Writing I	3
Total Hours		34

Minimum Required Grade: C-

## Construction Helper C.T.S.

This one-semester certificate program is designed to prepare candidates for entry-level positions across the construction industry. Designed to make students job-site ready, the program covers job-site safety as well as a hands on introduction to site and foundation work and basic carpentry.

### Certificate of Technical Studies - Construction Helper

#### Missoula College

**Degree Specific Credits: 16**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

#### Summary

Required Courses	16
Total Hours	16

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CSTN 120	Carpentry Bscs & Rough-In Frmg	5
CSTN 122	Beginning Carpentry Lab	5
CSTN 171	Site Prep, Found, Concrete Ins	3
OSH 130	OSHA 130 Industrial Trades Safety Training	3
Total Hours		16

Minimum Required Grade: C-

## Construction Management C.A.S.

The program provides students the opportunity to learn construction skills in a competency based learning environment. In addition to general education courses, students in the program learn the various steps of becoming a successful tradesperson in the construction industry, including safe practices, management and skills competencies. Students construct real world projects and can earn a Certificate of Applied Science and continue for another year to earn an Associate of Applied Science Degree.

### Certificate of Applied Science - Construction Management

#### Missoula College

**Degree Specific Credits:** 32

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

Required Courses	32
Total Hours	32

#### Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 111A	Introduction to Public Speaking	3
CSTN 120	Carpentry Bscs & Rough-In Frmg	5
CSTN 142	Int & Ext Finish Carpentry	4
CSTN 171	Site Prep, Found, Concrete Ins	3
CSTN 261	Building Management	4
CSTN 279	Commercial Construction	4
M 121	College Algebra	3
WRIT 101	College Writing I	3
Total Hours		32

Minimum Required Grade: C-

## Diesel Technology A.A.S.

### Jim Headlee, Director

The mission of the Diesel Technology Program is to provide the regional workforce with credentialed, skilled and competent diesel technicians and to be responsive to emerging workforce needs.

Students in the Diesel Technology program train to be diesel mechanics that repair diesel-powered trucks and heavy equipment. Students study hydraulics, electrical systems, fuel systems, power trains, air conditioning, brakes and suspension, engine theory, and engine diagnosis, beginning with basic principles and proceeding to an advanced level of system technology. Along with these core courses, students take classes in welding, machining, computers, communications, and math. Credit for independent study is available to those desiring additional instruction in diesel mechanics. Students who complete the program successfully are awarded the Associate of Applied Science degree.

The program often has a waiting list. Prospective students are encouraged to apply one year prior to anticipated school attendance. Contact the Jim Headlee, Program Director, at 406-243-7648 or Jim.Headlee@umontana.edu for more information.

## Associate of Applied Science - Diesel Technology

### Missoula College

**Degree Specific Credits:** 64

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	64
Total Hours	64

### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 102	Interprsnl Skills in Workplace	1
DST 120	Electrical Systems	8
DST 128	Engine Service I	4
DST 135	Power Trains	7
DST 221	Brakes Susp'n and Undercarr	6
DST 225	Hydraulics	6
DST 229	Engine Service II	7
DST 230	Air Conditioning	3
DST 231	Fuel Systems	5
DST 235	Advanced Power Trains	2
M 111	Technical Mathematics	3
MCH 115	Related Metals Processes III	3
OSH 110	OSHA 10 Hour Safety Training	1
WLDG 101	Welding Fund Auto Tech/Diesel	2
WRIT 101	Intro to Writing	3
Total Hours		64

Minimum Required Grade: C-

## Engineering Technology C.A.S.

The Engineering Technology program offers graduates a pathway into professional careers as technicians in civil, mechanical, and architectural drafting. Other career opportunities exist in geographic information systems, mapping, surveying, and technical design. This one-year program prepares students in mathematics, business, and writing, as well as the following skills:

- graphic communications;
- computer-aided design and modeling systems;
- geographic information systems; and
- surveying.

Graduates emerge with an understanding of how to use computer aided design software to solve real-world graphic communications problems in a team-oriented environment.

## Certificate of Applied Science - Engineering Technology

### Missoula College

**Degree Specific Credits:** 34

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Core Certificate Courses	34
Total Hours	34

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### Core Certificate Courses

**Note:** WRIT 121 may be substituted for WRIT 101 at the discretion of the program advisor based on future career and educational goals.



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 105S	Introduction to Business	3
CSCI 105	Computer Fluency	3
CSCI 172	Intro to Computer Modeling	3
DDSN 113A	Technical Drafting	3
DDSN 114	Introduction to CAD	3
DDSN 116	3D CAD	3
DDSN 244	GIS Mapping	3
DDSN 245	Civil Drafting	4
M 121	College Algebra	3
SRVY 230	Intro to Srvyg for Engineers	3
WRIT 101	College Writing I	3
or WRIT 121	Intro to Technical Writing	
Total Hours		34

Minimum Required Grade: C-

## Green Building C.T.S.

The mission of this one-year certificate is to give students an overview of the green building industry with instruction and hands-on experience in the principles of green building, energy efficiency, green rating systems, including the ICC700 and LLED programs, and prepare them for further study or entry-level careers in the emerging green building industry.

### Certificate of Technical Studies - Green Building

#### Missoula College

**Degree Specific Credits:** 30

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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#### Summary

Required Courses	30
Total Hours	30

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#### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BGEN 160S	Issues in Sustainability	3
BMGT 242	Front Line Supervision	3
CAPP 120	Introduction to Computers	3
CSTN 191	Special Topics	1
CSTN 261	Building Management	4
CSTN 282	Green Bldg Concept & Design I	4
CSTN 283	Green Bldg Concept & Design II	3
or NRGY 235	Building Energy Efficiency	
CSTN 286	Advanced Wood Buildings	3
M 111	Technical Mathematics	3
WRIT 121	Intro to Technical Writing	3
Total Hours		30

Minimum Required Grade: C-

# Heavy Equipment Operation C.A.S.

## Larry Reinholz, Director

The mission of the Heavy Equipment Operation Program is to provide the regional workforce with credentialed, skilled and competent heavy equipment operators and to be responsive to emerging workforce needs. The Heavy Equipment Operation Program provides students with a basic understanding of fundamental machine functions and is designed to develop apprentice-level skills in the operation of heavy equipment.

Students are trained to safely and properly operate and maintain a variety of heavy equipment, including crawler-tractors, graders, scrapers, front-end loaders, excavators, backhoes, and dump trucks. Students develop an understanding of basic surveying techniques, receive extensive training in safety regulations and procedures, and learn how to handle controls precisely and judge distances accurately. The program also promotes an awareness of potential job site difficulties and allows students to gain knowledge of the work ethic expected by employers in the construction industry.

A Certificate of Applied Science is awarded upon successful completion of the program.

This is an Autumn Semester entry program, and enrollment is limited. Prospective students are encouraged to apply early. Contact Larry Reinholz, Program Director, at 406-243-7643 or email [larry.reinholz@mso.umt.edu](mailto:larry.reinholz@mso.umt.edu) for more information.

## Certificate of Applied Science - Heavy Equipment Operation

### Missoula College

**Degree Specific Credits:** 38

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	38
Total Hours	38

### Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 102	Interpersonal Skills in Workplace	1
HEO 146	Safety & Basic Controls	5
HEO 148	Operational Skill Building	5
HEO 150	Job Simulation	6
HEO 151	Service & Maintenance	2
HEO 153	Const. Theory & Spec. Equip.	5
M 111	Technical Mathematics	3
OSH 110	OSHA 10 Hour Safety Training	1
SRVY 108	Construction Surveying	2
WLDG 103	Welding Fund Construction Trades	2
WRIT 101	Intro to Writing	3
Total Hours		38

Minimum Required Grade: C-

## Precision Machine Technology C.A.S.

The Precision Machine Technology Certificate of Applied Science program provides instruction in the theory and operation of mills and lathes, both manual and CNC, other tools related to the machinist trade, and associated programming. Students can earn NIMS credentials in all phases of the training. Upon completion of this program, students will enter employment in the machining industry, pursue apprenticeship in machining, or further their education toward higher academic degrees.

### Certificate of Applied Science - Precision Machine Technology

#### Missoula College

**Degree Specific Credits:** 33

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Required Courses		33
Total Hours		33

#### Required Courses

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
MCH 101	Introduction to Manufacturing Processes	1
MCH 102	Introduction to Manufacturing Materials	2
MCH 120	Blueprint Reading & Interpretation for Machining	3
MCH 122	Introduction to CAM	3
MCH 125	Introduction to CNC Lathes	3
MCH 127	Introduction to CNC Mills	3
MCH 129	Machine Quality Control and Precision Measurements	3
MCH 130	Machine Shop	3
MCH 132	Introduction to Manual Engine Lathes	4
MCH 134	Introduction to Manual Mills	4
OSH 110	OSHA 10 Hour Safety Training	1
WRIT 101	Intro to Writing	3
Total Hours		33

Minimum Required Grade: C-

## Precision Machine Technology C.T.S.

The Certificate of Technical Studies in Precision Machine Technology provides instruction in the theory and operation of manual mills and lathes, precision measurements, blueprint reading, and the use of other tools related to the machinist trade. Students can earn NIMS credentials in all phases of the training. Upon completion of this program, students will enter the workforce at entry level, pursue apprenticeship, or continue their machining training to earn the CAS.

### Certificate of Technical Studies - Precision Machine Technology

#### Missoula College

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

#### Summary

CODE	TITLE	HOURS
Required Courses		15
Total Hours		15

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
MCH 101	Introduction to Manufacturing Processes	1
MCH 120	Blueprint Reading & Interpretation for Machining	3
MCH 129	Machine Quality Control and Precision Measurements	3
MCH 132	Introduction to Manual Engine Lathes	4
MCH 134	Introduction to Manual Mills	4
Total Hours		15



University Of Montana

Minimum Required Grade: C-

## Sustainable Construction Technology A.A.S.

### John Freer, Director

This two-year Associate of Applied Science course of study is designed to prepare students for a wide range of building industry career paths. Students will get hands-on training in various job-site skills, including safety training as well as instruction and practice in entry-level skills, including site preparation and layout, plumbing, electrical, concrete forming and placement, residential framing, roofing, siding, and window installation. Students pursuing a certification in Green Building or HVAC can apply those credits toward this degree.

Additionally, students will be exposed to basic job-site control practices, scheduling, estimating, and the major guiding principles of green building and sustainable construction. Working on an actual on-site modular home, students completing the program will have experience and exposure to all aspects of residential construction, including foundations, framing, roofing, siding, insulation, drywall, cabinetry, floor finishes, and the process of basic project management.

## Associate of Applied Science - Sustainable Construction Technology

### Missoula College

**Degree Specific Credits:** 63

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	45
Elective Courses	18
Total Hours	63

### Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 102	Interpersonal Skills in the Workplace	1
CSTN 120	Carpentry Bscs & Rough-In Frmg	5
CSTN 122	Beginning Carpentry Lab	5
CSTN 142	Int & Ext Finish Carpentry	4
CSTN 143	Intermediate Carpentry Lab	4
CSTN 261	Building Management	4
CSTN 282	Green Bldg Concept & Design I	4
CSTN 283	Green Bldg Concept & Design II	3
DDSN 114	Introduction to CAD	3
M 111	Technical Mathematics	3
OSH 130	OSHA 130 Industrial Trades Safety Training	3
WRIT 101	College Writing I	3
or WRIT 121	Intro to Technical Writing	
Total Hours		45

Minimum Required Grade: C-

**Elective Courses**

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 18 credits of the following courses:</b>		<b>18</b>
CSTN 171	Site Prep, Found, Concrete Ins	
CSTN 205	Advanced Carpentry Lecture	
CSTN 206	Advanced Carpentry Lab	
CSTN 278	Applied Building Practices Lab	
CSTN 279	Commercial Construction	
CSTN 286	Advanced Wood Buildings	
CSTN 291	Special Topics	
CSTN 299	Capstone: Carpentry	
WLDG 103	Welding Fund Constructn Trades	
Total Hours		<b>18</b>

Minimum Required Grade: C-

## Welding Technology A.A.S.

### Bradley Platts, Director

The mission of the Welding Technology Program is to provide the regional workforce with credentialed, skilled, and competent welders and to be responsive to emerging workforce needs. The Welding Technology Program prepares students to operate and troubleshoot a variety of welding power sources and related equipment. The program prepares students to solve problems using computational skills and other problem-solving techniques essential to welding and steel fabrication. It also encourages the development of the teamwork and interpersonal skills required on the job.

Welding students develop skills in six different welding processes: oxyacetylene (OAW), shielded metal arc (SMAW), gas metal arc (GMAW), flux core arc, (FCAW), submerged arc (SAW), and gas tungsten arc welding (GTAW). Students also develop additional skills, such as blueprint reading and layout, metallurgy, and gain an understanding of how heating and cooling cycles affect the properties of metals. Students also study the design of jigs and fixtures and how to incorporate these into an automated welding system.

Courses such as Computer Aided Design and Drafting (CADD), OSHA Rules and Compliance, and Related Metals Processes provide for a solid background in the metals industry. Fabrication basics and Metal Design and Construction utilize all of the gained knowledge in an instructor-approved/student-designed project.

Welding technology students have the opportunity to become certified to American Welding Society Standards and receive documentation stating qualifications.

Students are awarded the Certificate of Applied Science upon successful completion of the first year of the Welding Technology program. Students are awarded the Associate of Applied Science degree upon successfully completing the two-year program.

The program often has a waiting list. For more detailed information, contact Brad Platts, Program Director, at 406-243-7647 or by email at [Bradley.platts@mso.umt.edu](mailto:Bradley.platts@mso.umt.edu).

## Associate of Applied Science - Welding Technology

### Missoula College

**Degree Specific Credits:** 60

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

Welding Program Required Courses	60
Total Hours	60

<b>Welding Program Required Courses</b>		
<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 102	Interprsnl Skills in Workplace	1
DDSN 114	Introduction to CAD	3
M 111	Technical Mathematics	3
MCH 114	Related Metals Processes II	3
OSH 110	OSHA 10 Hour Safety Training	1
WLDG 117	Blueprint Rdng & Weldng Symls	3
WLDG 145	Fabrication Basics	4
WLDG 150	Welding Layout Techniques	2
WLDG 180	Shielded Metal Arc Welding	4
WLDG 187	Flux Core Arc Welding	4
WLDG 205	Applied Metallurgy	4
WLDG 210	Pipe Welding - Integrated Lab	4
WLDG 215	GTAW (integrated lab)	4
WLDG 245	Metal Fab Design/Construction	4
WLDG 275	Gas Metal Arc Welding	4
WLDG 280	Weld Testing Certification	2
WLDG 285	Automation in Welding	3
WRIT 101	Intro to Writing	3
Total Hours		60

Minimum Required Grade: C-

## Welding Technology C.A.S.

### **Bradley Platts, Director**

The mission of the Welding Technology Program is to provide the regional workforce with credentialed, skilled, and competent welders and to be responsive to emerging workforce needs. The Welding Technology Program prepares students to operate and troubleshoot a variety of welding power sources and related equipment. The program prepares students to solve problems found within the welding industry using computational skills and other problem-solving techniques essential to welding and steel fabrication. It also encourages the development of teamwork and interpersonal skills required on the job.

Welding students develop skills in six different welding processes oxyacetylene (OAW), shielded metal arc (SMAW), gas metal arc (GMAW), flux core arc, (FCAW), submerged arc (SAW), and gas tungsten arc welding (GTAW). Beyond the development of welding skills and understanding of the process, they also study other skills, such as blueprint reading and layout, metallurgy, and gain an understanding of how heating and cooling cycles affect the properties of metals. Students also study the design of jigs and fixtures and how to incorporate these into an automated welding system.

The Welding Technology Program also has courses that provide for a solid background in the metals industry. Such courses are Computer Aided Design and Drafting (CADD), OSHA Rules and Compliance, and Related Metals Processes. Fabrication basics and Metal Design and Construction utilize all of the gained knowledge with an instructor approved/student designed project.

Welding technology students have the opportunity to become certified to American Welding Society Standards and receive documentation stating qualifications.

Students are awarded the Certificate of Applied Science upon successful completion of the first year of the Welding Technology program. Students are awarded the Associate of Applied Science degree upon successfully completing the two-year program.

The program often has a waiting list. For more detailed information, contact Brad Platts, Program Director, at 406-243-7647 or by email at [Bradley.platts@mso.umt.edu](mailto:Bradley.platts@mso.umt.edu).

## Certificate of Applied Science - Welding Technology

### Missoula College

**Degree Specific Credits:** 33

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	33
Total Hours	33

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CAPP 120	Introduction to Computers	3
COMX 115S	Introduction to Interpersonal Communications	3
M 111	Technical Mathematics	3
MCH 114	Related Metals Processes II	3
OSH 110	OSHA 10 Hour Safety Training	1
WLDG 117	Blueprint Rdng & Weldng Symbls	3
WLDG 145	Fabrication Basics	4
WLDG 150	Welding Layout Techniques	2
WLDG 180	Shielded Metal Arc Welding	4
WLDG 187	Flux Core Arc Welding	4
WRIT 101	Intro to Writing	3
Total Hours		33

Minimum Required Grade: C-



## Phyllis J. Washington College of Education

**Adrea Lawrence, Dean**

**Susan Harper-Whalen, Associate Dean**

The Phyllis J. Washington College of Education is comprised of four academic departments:

- Counseling
- Educational Leadership
- Global Youth Development
- Teaching and Learning

It is also the home for the Institute for Educational Research and Service (IERS).

**Mission:** The Phyllis J. Washington College of Education shapes professional practices that contribute to the development of human potential. We are individuals in a community of lifelong learners, guided by respect for knowledge, human dignity, and ethical behavior. We work together producing and disseminating knowledge to advance the physical, emotional, and intellectual health of a diverse society.

The College of Education coordinates the University of Montana Professional Education Unit, a unit comprised of initial teacher preparation at the elementary and secondary levels, and the advanced preparation of teachers, certified speech-language pathologists, educational leaders, school counselors, and school psychologists. The Departments of Teaching and Learning, Educational Leadership, and Counseling prepare professionals for careers in education with bachelor, master's, Education Specialist and Doctor of Education programs while the School Psychology Program, housed in the Psychology Department in the College of Humanities and Sciences, prepares students for careers in education with its master's, education specialist, and doctoral degrees. These programs are organized to foster the development of learning communities and incorporate three basic themes: integration of knowledge and experience; cooperation among participants; and inclusiveness, caring, and respect for others. The Professional Education Unit at the University of Montana is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Central to its research and outreach efforts with P/K-12 schools, the College of Education's Institute for Educational Research and Service (IERS) designs, evaluates, and disseminates programs that support the well-being of students and communities. Since 1957, IERS has collaborated with numerous local, state, national, and federal organizations to provide effective, data-driven research models that enhance the social development and academic achievement of all learners. Externally sponsored teaching, research, and service activities are central to IERS. In addition, the College of Education supports a Preschool Laboratories, Preschool Program, Health and Human Performance Laboratory and Technology Resource Center. These programs offer enhanced opportunities for student involvement and learning.

Specific program options within the College of Education are described in the various departmental sections of this catalog.

## Counseling Department < University of Montana

### Counseling Department

**Veronica Johnson, Chair**

The Counselor Education program educates students for employment in school (K-12 and higher education) and community mental health and human service settings. At the doctoral level, students are trained as counselor educators in faculty positions in higher education and in leadership positions in the counseling profession. Counselors are practitioners, consultants, and coordinators who assist in problem solving, decision-making, personal growth and development, in individual, family school, and/or career issues. Counselors receive training in the eight core areas identified by the American Counseling Association Council for Accreditation of Counseling and Related Educational Programs:

1. Human growth and development,
2. Social and cultural foundations,
3. The helping relationship,
4. Group theories and methods,
5. Career and lifestyle development,
6. Client assessment and evaluation,
7. Research and program evaluation, and
8. Ethics and professional orientation.

At the Master s level, we offer a School Counseling M.A. and a Clinical Mental Health Counseling M.A. Both options requires additional specialty courses and comprehensive written and oral examinations focused on the student's career track. The more advanced graduate degrees (Ed.S., Ed.D., and Ph.D.) develop depth, supervisory, and leadership skills in these areas.

The M.A., Ed.S., Ed.D., and Ph.D. are offered in Counselor Education. Information regarding specific requirements and program options is available from the Phyllis J. Washington College of Education and Human Sciences website. For more information, please refer to the University of Montana Graduate Programs and Admissions Catalog. Graduate programs are accredited by NCATE and CACREP.

### Admission to Counseling

Applicants for this program should contact the Department for more specific admissions information. Requirements include official transcripts from all undergraduate and graduate institutions attended; three current letters of recommendation; and a letter of application stating academic and professional background, purpose in obtaining the degree, and thoughts about eventual employment and career direction. Applicants have the option to include GRE scores. Priority deadline for the M.A. programs is February 1<sup>st</sup> and for December 15<sup>th</sup> for the Ed.D. and Ph.D. programs. Admission is competitive.

### Certification Requirements

The Counselor Education, M.A., School Counseling option, leads to licensure at the Class VI level. The Counselor Education M.A. for Clinical Mental Health Counseling prepares graduates for licensure candidacy as Licensed Clinical Professional Counselors (LCPC) in the state of Montana.

## Educational Leadership Department

### John Matt, Chair

The Educational Leadership knowledge base emphasizes the realities of the workplace, blending practical tasks with the conceptual models of effective leadership. The model uses leadership assessment and problem-based learning throughout nine curricular strands:

- change/future,
- leadership,
- research community,
- communication,
- assessment/program evaluation,
- management,
- diversity,
- curriculum, and
- professionalism/socialization.

Students at both degree levels experience integrated coursework, performance-based assessment, and exit interviews on completion of the degree programs.

## Programs

The M.Ed., Ed.S., Principal Leadership Certificate, Superintendent Leadership Certificate, and Ed.D. are offered, along with an M.Ed. and Ph.D. in International Educational Leadership. Information regarding specific requirements and program options is available from the Phyllis J. Washington College of Education and Human Sciences website. For more information, please refer to the University of Montana Graduate Programs and Admissions Catalog. Graduate programs are accredited by The National Council for Accreditation of Teacher Education (NCATE) and The Montana Board of Public Education (BPE).

## Admission to Educational Leadership

The Program Admissions Committee has established policies and standards for admission which include

- the GRE (verbal and quantitative) required for Doctoral admissions but not Master s Level admissions;
- three letters of recommendation (one from an immediate supervisor);
- official transcripts for all undergraduate and graduate coursework;
- qualifying examination; and
- interviews (doctoral).

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Contact the Department for details.

## **Certification Requirements**

Educational Leadership Master s Degree and Principal Leadership or Superintendent Leadership Certificate Montana Class 3 Administrative Licensure with either a K-12 Principal or Superintendent endorsement. Please note that in addition to the coursework and degree requirements, the State of Montana also requires licensed teaching or administrative experience for the Class 3 license.

## Global Youth Development Department

**Lindsey Nichols, Assistant Professor of Counselor Education, Director**

Housed in the Department of Counselor Education, this interdisciplinary master's degree program is designed for students who wish to engage in culturally-relevant volunteer work or paid employment in the realm of child and family assistance. It is affiliated with the United States Peace Corps as a partner school for their master's international program. Requirements include one year of full-time instruction at UM, a significant period of time engaging in internship work in an applied intercultural setting, and a final professional paper or thesis. Internships will typically be 1-2 years and will involve work in a culture other than one's own. Students participating in this program are expected to gain the following background and competencies:

- important interculturally-informed helping skills for working with youth, women, families and communities in culture other than their own
- a solid background in issues, concerns, and critiques regarding assistance and interventions across culture, both historically and currently
- the opportunity to pursue and participate in a significant field experience, working with an established helping agency in another culture or country

### Undergraduate Minor

- Human and Family Development

## Teaching and Learning Department

### Trent Atkins, Chair

The Department of Teaching and Learning offers the Bachelor of Arts degree in elementary education and teaching licensure in elementary education. The department also offers teaching licensure at both the secondary and K-12 levels for students who are earning or have already completed the baccalaureate degree (teaching major or teaching minor) in one of the following state-approved content areas: Art, Biology, Business Education, Chemistry, Earth Science, Economics, English, English as a Second Language, French, General Science Broadfield, Geography, German, Government, Health and Human Performance, History, Latin, Library Media, Mathematics, Music, Physics, Psychology, Reading, Russian, Social Studies Broadfield, Sociology, Spanish, Special Education, and Theatre. (See specific requirements for each in the following pages.) At the graduate level, the department offers master and doctoral degrees in Curriculum and Instruction. Programs across all degree levels are organized to foster the development of learning communities and incorporate three essential themes: integration of ideas; cooperative endeavors; and respect for diversity and individual worth. For more information go to the Department of Teaching and Learning web site.

## Graduate Programs

The department offers the Master of Education (M.Ed.) in curriculum and instruction. Students select from one of the following options:

- curriculum studies,
- early childhood education,
- library media services,
- literacy education, and
- special education.

Students may earn the master's degree in combination with requirements for initial teacher licensure at the elementary and secondary and K-12 levels. This option is further explained below. The department also offers the Doctor of Education (Ed.D.) in curriculum and instruction. Information about these graduate programs is available from the department office and website, UM Graduate Programs and Admissions Catalog.

## Teacher Preparation

### Elementary Education

Individuals preparing to teach in elementary schools (license for grades K-8) complete a major in elementary education. Students apply for admission to the Teacher Education Programs, usually at the end of the sophomore year, in order to continue with the education (EDU) sequence of courses. All elementary education majors are advised by full-time advisors within the Department of Curriculum and Instruction.

### Secondary and K-12 licensure

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Students preparing to teach at the middle or high school levels (license for grades 5-12) or in K-12 licensure areas will declare a major in the subject area(s) they wish to teach, e.g., English, mathematics, music, or any other of the state-approved major content endorsement areas listed previously. They are advised within their major department(s) and, upon admission to the Teacher Education Program, they also are advised within the Department of Curriculum and Instruction regarding the requirements necessary to earn secondary or K-12 licensure. All secondary and K-12 licensure students seek admission to the Teacher Education Program, usually at the end of the sophomore year, and complete course work required for licensure in Curriculum and Instruction and in their major content area(s).

Applicants for Montana teaching licensure must:

1. satisfy all degree and licensure requirements as outlined below; and
2. be at least 18 years of age.

Information about the Teacher Education Program is available in the department office and website.

### Master's Degree and Initial Licensure

Individuals who have completed a bachelor's degree may elect to apply to the department's Graduate Program and combine the master's degree in curriculum and instruction (curriculum studies option) with licensure to teach. At the secondary and K-12 licensure level, the combined program may be completed in a summer-autumn-spring-summer sequence provided the student previously has completed most of the required content courses. At the elementary licensure level, the program typically takes two academic years.

### Assessment at Admission to the Undergraduate Teacher Education Program

Individuals seeking licensure to teach must apply for admission to the professional Teacher Education Program. Admission is limited to approximately 125 elementary and 125 secondary candidates per year. Deadlines for application are September 15 and February 15. Individuals are eligible for consideration for admission if they have:

- been admitted to the University of Montana;
- completed at least 30 semester credits;
- earned a minimum cumulative GPA (including all transfer credits) of 2.75;
- completed an English writing course (WRIT 101) with a grade of C- or better;
- demonstrated evidence of writing ability in an application essay;
- documented appropriate experience working with children or youth;
- secured supportive recommendations from two faculty members;
- presented results of a national fingerprint-based background check; and
- demonstrated appropriate professional behaviors and dispositions associated with success in the profession.

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The Teacher Education Program Admission Application packet includes a policy and procedures handbook and can be downloaded from the website.

Once admitted, licensure candidates must maintain a minimum GPA of 2.75 each semester to continue in the program. Candidates who interrupt their studies for more than two years are placed on inactive status and must apply for readmission to both the University and the Teacher Education Program.

Candidates seeking a K-12 endorsement in library, reading, or special education must have full admission to the Teacher Education Program or be a licensed teacher before applying to one of these specialized programs.

Degree-holding individuals are invited to submit transcripts for review to determine how previous course work applies. They may earn a second baccalaureate degree and/or a teaching license or they may combine elementary, secondary, or K-12 licensure with a master's degree. They should enroll with the Admissions Office as post-baccalaureate unless pursuing a graduate degree.

## Admission Policy for Minority Students and Students with Disabilities

The Teacher Education Program is committed to providing opportunities for teacher preparation for members of groups that have been historically disadvantaged and subject to discrimination. The criteria for admission are the same for students with disabilities and for members of racial, ethnic and other minorities, as for other students; however, students who do not meet one or more of the criteria for admission are encouraged to describe in their applications any special circumstances, experiences, skills and/or special talents that may compensate for unmet criteria. The physical, social, economic, and cultural circumstances that may have influenced a student's ability to achieve minimum eligibility for admission will be considered. A special effort will be made to determine the student's abilities and potential to overcome disadvantage or discrimination and become a successful beginning teacher. Upon entry to the program, the candidate will be assigned to a faculty mentor. The candidate and mentor will design a course of study appropriate for the candidate's progression toward the degree and/or licensure.

## Assessment at Application for Student Teaching

Candidates begin planning for student teaching two semesters prior to placement. Candidates are eligible to student teach if they have:

- full admission into the Teacher Education Program;
- a grade of C- or better in all required licensure courses;
- a minimum cumulative GPA of 2.75 (and 2.75 in each field of licensure);
- results of a current national fingerprint-based background check (candidates with misdemeanors or felonies may be subject to further review by the Field Experience Committee);
- a completed application to student teach and the consent of the Director of Field Experiences;
- for elementary education majors, student should be enrolled in Level of the Program, and have completed all coursework in all previous levels.



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- for secondary licensure candidates, all methods courses, two thirds of content course work, and approval by departments in the major/minor content area.

Consult the Teacher Education Policy Handbook for application deadlines and procedures. The Student Teaching Application is available on the Field Experiences website.

Internships and practica in library, reading, and special education do not substitute for the student teaching semester required for licensure in a subject field.

## Assessment at Program Completion

As active participants in this learning community, candidates are expected to assume roles as both learners and teachers in course work and clinical performance. Through personal disposition, classroom performance, and professional action, candidates who complete the Teacher Education Program at the University of Montana will be able to:

- demonstrate knowledge of the disciplines and subject matter related to curriculum;
- design interdisciplinary and discrete subject area instruction to achieve curriculum goals;
- use appropriate technologies and resources to enhance instruction and student performance;
- select and design appropriate, authentic means of assessing student learning and progress;
- implement instructional and behavioral management strategies to promote a safe and positive learning environment;
- engage students in learning activities that promote critical and creative thinking;
- design and organize learning environments to accommodate learners;
- communicate clearly, accurately and professionally with students and their families, colleagues, and community members;
- reflect on professional practices and demonstrate commitment to fairness and the ability of all to learn.

## Indian Education for All

It is Montana's constitutional intent that the state's education system will recognize the distinct and unique cultural heritage of American Indians and will be committed in its education goals to the preservation of their cultural heritage. The intent of the legislature as expressed in MCA20-1-501, Indian Education for All, is that every Montanan, whether Indian or non-Indian, be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner. It is also intended that educational personnel provide means by which school personnel will gain an understanding for the American Indian people.

Candidates preparing for teaching licensure in all endorsement areas are required to complete a minimum of one course in Native American Studies. Candidates also may choose ANTY 323X , Indians of Montana, to meet this requirement. Throughout their programs of study candidates must demonstrate

## University Of Montana

1. ability to integrate into their content areas knowledge of the history, cultural heritage, and contemporary status of American Indians and tribes in Montana;
2. knowledge of how students within different populations, including Montana American Indians, differ in their approaches to learning; and
3. ability to create instructional opportunities that are adapted to diverse learners, including situations where concentrated generational poverty has affected student academic achievement.

## Undergraduate

- Elementary Education B.A.
- Early Childhood Education P-3 B.A.

## Undergraduate Minors

- Early Childhood Education Minor

## Undergraduate Teaching Licensures

- Teacher Library Media Licensure
- Teaching ESL Licensure
- Teaching Reading Licensure
- Teaching Special Education Licensure
- Technology in Education Licensure
- Secondary Licensure

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## **Early Childhood Education P-3 B.A.**

### **Bachelor of Arts - Early Childhood Education P-3**

Phyllis J. Washington College of Education

**Degree Specific Credits:** 101-102

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** Admission to the Teacher Education Program is required to enroll in any EDU and EDEC courses.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Literature Content Courses	3-4
Math Content Courses	6
Science Content Courses	13
Social Studies Content Courses	12
Geography	
Social Studies	
Health and Physical Education	3
The Arts	6
Teacher Education Program - Professional Licensure Courses	58
Level 1 - Learning and Instruction	
Level 2 - Pedagogy and Content Knowledge	
Level 3 - Pedagogy and Content Knowledge	
Level 4 - Student Teaching	
Total Hours	101-102

### Literature Content Courses

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
EDU 331	Lit & Literacy for Children	
LIT 110L	Intro to Lit	
LIT 120L	Poetry	
LIT 236L	Literary Histories	
LIT 243L	Genres, Themes, Approaches	
NASX 235X	Oral/Written Trads Native Amer	
Total Hours		3-4

Minimum Required Grade: C-

### Math Content Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 132	Numbers and Operations for Elementary School Teachers	3
M 133	Geometry and Measurement for Elementary School Teachers	3
Total Hours		6

Minimum Required Grade: C-

### Science Content Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 226N	Gen Science: Chemical & Life Sciences	5
ENST 472	Gen Sci: Conservation Education	3
PHSX 225N	Gen Science: Phys & Chem Sci	5
Total Hours		13

Minimum Required Grade: C-

## Social Studies Content Courses

**Rule:** Complete the following subcategories. 12 total credits required.

### Geography

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GPHY 121S	Human Geography	3
or GPHY 141S	Geography of World Regions	
Total Hours		3

Minimum Required Grade: C-

### Social Studies Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ANTY 122S	Race and Minorities	3
HSTA 255	Montana History	3
NASX 105H	Intro Native Amer Studies	3
Total Hours		9

Minimum Required Grade: C-

## Health and Physical Education

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HEE 302	Methods of Instructional Strategies in Elementary PE	3
Total Hours		3

Minimum Required Grade: C-

## The Arts

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 302A	Elementary School Art	2
MUSE 397	Methods: K-8 Music	2
THTR 239A	Creative Drama/Dance: K-8	2
Total Hours		6

Minimum Required Grade: C-

## Teacher Education Program - Professional Licensure Courses

**Rule:** Complete the following subcategories. 64 total credits required.

### Level 1 - Learning and Instruction

**Note:** Students are required to complete EDU 397 Methods: PK-4: Early Numeracy (3 credits) and EDU 397 Methods: PK-3 Early Literacy (3 credits). All courses must be completed concurrently.

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 222	Educational Psych Child Dev	3
EDU 338	Academic Interventions	3
EDU 360	Promoting Wellbeing in P-12 Classrooms	2
EDU 395	Clinical Experience	1
EDU 397	Methods: Teaching & Assessing	6
Total Hours		15

Minimum Required Grade: C-

**Level 2 - Pedagogy and Content Knowledge**

**Note:** All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDEC 408	Early Childhood Principles and Practices	3
EDEC 410	Families, Communities, Culture	3
EDU 339	Tchg Assess PK-8 Lang Arts	3
EDU 346	Exceptionalities	3
EDU 370	IntegTech into Educ	3
EDU 395	Clinical Experience (Level 2)	1
Total Hours		16

Minimum Required Grade: C-

**Level 3 - Pedagogy and Content Knowledge**

**Note:** All courses must be completed concurrently.



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 407E	Ethics & Policy Issues	3
EDEC 420	Implementing Standards and Assessment in Play-Based Environments	3
EDEC 434	Social/Emotional Development & Child Guidance	3
EDEC 453	Early Childhood STEM	3
EDEC 495	EC Fieldwork/Practicum: Integrated Curriculum	3
Total Hours		15

Minimum Required Grade: C-

**Level 4 - Student Teaching**

**Note:** All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 494	Seminar:Refl Pract & App Rsrch	1
EDU 495	Student Teaching	14
Total Hours		15

Minimum Required Grade: C-

# Early Childhood Education Minor

## Minor - Early Childhood Education

Phyllis J. Washington College of Education

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** This minor can only be completed by individuals seeking K-8 elementary licensure or currently licensed elementary education teachers.

### Summary

Course List		
CODE	TITLE	HOURS
Required courses		24
Total Hours		24

### Required Courses

**Note:** Students must take two semesters of EDU 397:

1. Methods: PK-4 Early Numeracy and
2. Methods: PK-3 Early Literacy.

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		Course List
CODE	TITLE	HOURS
Complete all of the following courses:		
EDEC 408	Early Childhood Principles and Practices	3
EDEC 410	Families, Communities, Culture	3
EDEC 420	Implementing Standards and Assessment in Play-Based Environments	3
EDEC 434	Social/Emotional Development & Child Guidance	3
EDEC 495	EC Fieldwork/Practicum: Integrated Curriculum	3
EDU 222	Educational Psych Child Dev	3
EDU 397	Methods: Teaching & Assessing (two semesters)	6
Total Hours		24

Minimum Required Grade: C-

University Of Montana

# Elementary Education B.A.

## Bachelor of Arts - Elementary Education

Phyllis J. Washington College of Education

**Degree Specific Credits:** 112-113

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** Admission to the Teacher Education Program is required to enroll in any EDU courses.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

## University Of Montana

Language Arts Content Courses	6-7
Literature	
Children's Literature	
Mathematics Content Courses	9
Science Content Courses	10
Social Studies Content Courses	16
Geography	
American History	
Other Social Studies Courses	
Health and Physical Education	5
The Arts	6
Teacher Education Program - Professional Licensure Courses	60
Level 1	
Level 2	
Level 3	
Level 4	
Total Hours	112-113

### Language Arts Content Courses

#### Literature

**Note:** Other literature courses may meet this requirement. Please consult with the Education Advisor for approval.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
LIT 110L	Intro to Lit	
LIT 120L	Poetry	
LIT 236L	Literary Histories	
LIT 246L	Genres, Themes, Approaches	
NASX 235X	Oral/Written Traditions of Native Americans	
Total Hours		3-4

Minimum Required Grade: C-

### Children's Literature

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 331	Lit & Literacy for Children	3
Total Hours		3

Minimum Required Grade: C-

### Mathematics Content Courses

**Note:** Other mathematics courses may meet the requirements. Please consult with the Education Advisor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
M 132	Numbers and Operations for Elementary School Teachers	3
M 133	Geometry and Measurement for Elementary School Teachers	3
M 234	Higher Mathematics for Elementary School Teachers	3
Total Hours		9

Minimum Required Grade: C-

## Science Content Courses

**Note:** Other science courses may meet the requirements. Please consult with the Education Advisor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 226N	Gen Science: Chemical & Life Sciences	5
PHSX 225N	Gen Science: Phys & Chem Sci	5
Total Hours		10

Minimum Required Grade: C-

## Social Studies Content Courses

**Rule:** Complete the following subcategories. 16 total credits required.

### Geography

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
GPHY 121S	Human Geography	3
or GPHY 141S	Geography of World Regions	
Total Hours		3

Minimum Required Grade: C-

### American History

**Note:** Other history courses may fulfill this requirement. Please consult with the Education Advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
HSTA 101H	American History I	4
or HSTA 102H	American History II	
Total Hours		4

Minimum Required Grade: C-

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## Other Social Studies Courses

**Note:** Other Native American Studies courses may fulfill the NASX 105H requirement. Please consult with the Education Advisor.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
HSTA 255	Montana History	3
NASX 105H	Intro Native Amer Studies	3
PSCI 210S	Intro to American Government	3
Total Hours		9

Minimum Required Grade: C-

## Health and Physical Education

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HEE 302	Methods of Instructional Strategies in Elementary PE	3
EDU 360	Promoting Well-Being in the Classroom P-12	2
Total Hours		5

Minimum Required Grade: C-

## The Arts

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ARTZ 302A	Elementary School Art	2
MUSE 397	Methods: K-8 Music	2
THTR 239A	Creative Drama/Dance: K-8	2
Total Hours		6



Minimum Required Grade: C-

## Teacher Education Program - Professional Licensure Courses

**Rule:** Complete the following subcategories. 60 total credits required.

### Level 1

**Note:** Students are required to complete EDU 397 Methods: Early Numeracy K-4 (3 credits) and EDU 397 Methods: PK-3 Early Reading (3 credits). All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 222	Educational Psych Child Dev	3
EDU 338	Academic Interventions	3
EDU 395	Clinical Experience	1
EDU 397	Methods: Teaching & Assessing (two courses)	6
Total Hours		13

Minimum Required Grade: C-

### Level 2

**Note:** Students are required to complete EDU 397 Methods: PK-8 Language Arts (3 credits). All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 346	Exceptionalities	3
EDU 370	IntegTech into Educ	3
EDU 395	Clinical Experience	1
EDU 397	Methods: Teaching & Assessing	3
EDU 407E	Ethics & Policy Issues	3
ENST 472	Gen Sci: Conservation Education	3
Total Hours		16

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Minimum Required Grade: C-

## Level 3

### Note:

- Students must complete EDU 495 Clinical Experience: Level 3 (1 credit).
- Students must complete four EDU 497 methods courses, including:
  - 5-8 Mathematics (3 credits),
  - K-8 Social Studies (3 credits),
  - K-8 Science (3 credits),
  - 4-8 Reading (3 credits).
- All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 340	Classroom Management	3
EDU 495	Student Teaching	1
EDU 497	Teaching and Assessing (complete four courses)	12
Total Hours		16

Minimum Required Grade: C-

## Level 4

**Note:** EDU 494 is completed for 1 credit and EDU 495 is completed for 14 credits. All courses must be completed concurrently.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 494	Seminar:Refl Pract & App Rsrch	1
EDU 495	Student Teaching	14
Total Hours		15

Minimum Required Grade: C-

## Secondary Licensure

Students preparing to teach at the middle or high school levels (license for grades 5-12) will declare a major in the subject area(s) they wish to teach, e.g., English, mathematics, or any other of the state-approved major content endorsement areas listed previously. They are advised within their major department(s) and, upon admission to the Teacher Education Program, they also are advised within the Department of Teaching and Learning regarding the requirements necessary to earn secondary licensure. All secondary licensure students seek admission to the Teacher Education Program, usually at the end of the sophomore year, and complete course work required for licensure in Curriculum and Instruction and in their major content area(s).

Applicants for Montana teaching licensure must:

1. satisfy all degree and licensure requirements as outlined below; and
2. be at least 18 years of age.

Information about the Teacher Education Program is available in the department office or on our website at: <http://www.coehs.umt.edu/>

## Teaching Licensure - Secondary Certification

### Phyllis J. Washington College of Education

**Degree Specific Credits:** 38

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** The Teacher Education Program coursework is completed in addition to the teaching track(s) in a major in a teaching content area and leads to secondary (5-12) or K-12 teaching licensure in that content area. Individuals must be admitted to the Teacher Education Program to enroll in any EDU courses. See the Teaching and Learning website for additional information regarding admission.

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## Summary

## University Of Montana

Teacher Education Program Prerequisite	3
Additional Licensure Requirements	5
Education Coursework	15
Education Field Experiences	2
Student Teaching Field Experience	15
Total Hours	40

### Teacher Education Program Prerequisite

**Note:** This course must be completed before applying to the Teacher Education Program.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
WRIT 101	College Writing I	3
Total Hours		3

Minimum Required Grade: C-

### Additional Licensure Requirements

**Note:** Students may take any NASX course to fulfill this requirement. If you choose to take a course with a Native American focus outside of the Native American Studies Department, please consult with your Teaching and Learning advisor for approval.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
HEE 330	Promoting Well-Being in the Classroom P-12	2
NASX 105H	Intro Native Amer Studies (or any other NASX course)	3
Total Hours		5

Minimum Required Grade: C-

### Education Coursework

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**Note:** Admission to the Teacher Education Program is required to enroll in the following courses.

**Notes:**

- Math and Business majors are not required to complete EDU 370. They meet the technology requirement through departmental requirements.
- Music majors do not complete EDU 370 nor EDU 481. They meet the technology and literacy requirements through departmental requirements.
- English majors do not complete EDU 481. They meet the literacy requirement through departmental requirements.
- All students must complete major and/or minor teaching methods courses specific to their content areas. These methods course requirements are listed within the requirements for each program of study.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 221	Ed Psych & Measuremnt	3
EDU 345	Excptnlty & Clsrn Mgmt	3
EDU 370	IntegTech into Educ	3
EDU 407E	Ethics & Policy Issues	3
EDU 481	Content Area Literacy	3
Total Hours		15

Minimum Required Grade: C-

## Education Field Experiences

**Note:** Admission to the Teacher Education Program is required to enroll in the following courses. EDU 202 is a prerequisite to EDU 395. EDU 395 is taken concurrently with the content-specific methods course.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 202	Early Field Experience	1
EDU 395	Clinical Experience	1
Total Hours		2

Minimum Required Grade: C-

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## Student Teaching Field Experience

**Note:** All content, methods, and education courses must be completed prior to enrolling in the student teaching semester. An application is required to determine student teaching eligibility. See Teacher Education Services or the Office of Field Experiences for deadlines. The EDU 494 course is completed for 1 credit and the EDU 495 course is completed for 14 credits.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 494	Seminar:Refl Pract & App Rsrch	1
EDU 495	Student Teaching	14
Total Hours		15

Minimum Required Grade: C-

## Teaching ESL Licensure

Those seeking licensure to teach ESL need to contact the Teaching and Learning Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form.

### Teaching Licensure - Teaching ESL

#### Phyllis J. Washington College of Education

**Degree Specific Credits:** 22

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

**Note:** Those seeking a K-12 endorsement in teaching ESL must have full admission to the Teacher Education Program or be a licensed teacher before applying to this specialized program.

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### Summary

Core Courses	16
Required Courses	
Core Options	
Elective Courses	6
Total Hours	22

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### Core Courses

**Rule:** Complete the following subcategories. 16 total credits required.

#### Required Courses

**Note:** LING 495 must be completed for 3 credits.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LING 470	Linguistic Analysis	3
LING 471	Phonetics and Phonology	3
LING 472	Syntax	3
LING 480	Tchg Engl as For Lang	3
LING 495	ESL Practicum	1
Total Hours		13

Minimum Required Grade: C-

### Core Options

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
LING 477	Bilingualism	3
or LING 478	Learner Language	
Total Hours		3

Minimum Required Grade: C-

### Elective Courses

**Note:** LING 477 or LING 478 may be taken as an Elective if not taken as a Required Course.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		6
LING 473	Language and Culture	
LING 489	Morphology	
Total Hours		6

Minimum Required Grade: C-



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## Secondary Teaching Licensure

**Note:** For endorsement to teach ESL, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

## Teaching Library Media Licensure

Those seeking the Teacher Librarian endorsement need to contact the Teaching and Learning Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form.

### Teaching Licensure - Teacher Librarian Endorsement

#### Phyllis J. Washington College of Education

**Endorsement Specific Credits: 21**

**Required Cumulative GPA: 2.75**

**Catalog Year: 2021-22**

**Note:** This program of study can only be completed by those pursuing a teaching endorsement in another content area or by currently licensed teachers. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education and Human Sciences for more information. This program is offered jointly online with UM-Missoula and UM-Western. Some courses will be taken through UM-Western.

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### Summary

Library Media Courses	19
Library Media Practicum	2
Total Hours	21

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### Library Media Courses

**Note:** Students will complete LIBM 461 through UM-Western. Students may choose to substitute EDU 391 online through UM-Western in place of EDU 331 and EDU 432.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
LIBM 461	Information Literacy	3
LIBM 462	Youth Literature for Librarians	3
LIBM 464	Reference Resources	3
LIBM 466	Libraries and Technology	3
LIBM 467	Collection and Cataloging	4
LIBM 468	Admin & Assess of Library Programs	3
Total Hours		19

Minimum Required Grade: C-

## Library Media Practicum

**Note:** The practicum requires 60 hours in a school or public library. All library media coursework must be completed prior to enrolling in the library media practicum.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
LIBM 495	Practicum	2
Total Hours		2

Minimum Required Grade: C-

## Teaching Reading Licensure

Those seeking licensure to teach reading need to contact the Teaching and Learning Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form.

### Teaching Licensure - Teaching Reading

#### Phyllis J. Washington College of Education

**Degree Specific Credits:** 27

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** This program of study can only be completed by those pursuing a teaching endorsement in another content area or by currently licensed teachers. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education for more information.

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### Summary

Reading Teaching Courses	21
Reading Teaching Practicum	6
Total Hours	27

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### Reading Teaching Courses

**Note:** The EDU 397 course number is used for multiple courses. Students should register for EDU 397 Methods: PK-3 Early Literacy. The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Teaching and Assessing 4-8 Reading.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
EDU 331	Literature & Literacy for Children	3
EDU 339	Methods: PK-8 Language Arts	3
EDU 397	Methods: Teaching & Assessing	3
EDU 432	Literature & Literacy for Young Adults	3
EDU 438	Literacy Assessment, Diagnosis & Instruction	3
EDU 481	Content Area Literacy	3
EDU 497	Teaching and Assessing	3
Total Hours		21

Minimum Required Grade: C-

## Reading Teaching Practicum

**Note:** All reading coursework must be complete prior to enrolling in the reading practicum.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 456	Application of Literacy Models: K-12	6
Total Hours		6

Minimum Required Grade: C-

## Teaching Special Education Licensure

Those seeking the special education endorsement need to contact the Teaching and Learning Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form.

### Teaching Licensure - Teaching Special Education

#### Phyllis J. Washington College of Education

**Degree Specific Credits:** 34

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

**Note:** This program of study can only be completed by those pursuing a teaching endorsement in another content area or by currently licensed teachers. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning in the College of Education and Human Sciences for more information.

### Summary

Early Childhood Special Education	3
Special Education Requirements	21
Special Education Student Teaching	10
Total Hours	34

### Early Childhood Special Education

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
EDSP 401	Intro Early Intervention	3
or EDSP 403	Curric/Mthds Early Spec Educ	
Total Hours		3

Minimum Required Grade: B-

## Special Education Requirements

CODE	TITLE	HOURS
<b>Complete all of the following course:</b>		
EDSP 405	Assess of Students with Excep	3
EDSP 426	Intro Transition & Community	3
EDSP 454	Adv Academic Interventions	3
EDSP 456	Intro Mthds Low Incidence Dis	3
EDSP 461	Positive Behavior Supports	3
EDSP 462	Spec Ed Law, Policy, Practice	3
EDU 438	Ltrcy Asmnt, Diagnosis & Instr	3
Total Hours		21

Minimum Required Grade: B-

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## Special Education Student Teaching

**Note:** All special education coursework must be completed prior to the special education student teaching experience. An application is required to determine special education student teaching eligibility. See Teacher Education Services or the Office of Field Experiences for deadlines.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDSP 495	Student Teaching: Special Educ	10
Total Hours		10

Minimum Required Grade: B-

## Technology in Education Licensure

Those seeking the Technology in Education endorsement need to contact the Teaching and Learning Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form.

### Teaching Licensure - Technology in Education

#### Phyllis J. Washington College of Education

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.75

**Catalog Year:** 2021-22

**Note:** Technology in Education is an Area of Permissive Special Competency. Completion of these requirements leads to an area of permissive special competency in technology in education for those holding or attaining a Montana teaching license. It does not qualify as a teaching endorsement in Montana. See the Department of Teaching and Learning in the College of Education and Human Sciences for additional information.

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### Summary

Technology in Education Requirements	21
Total Hours	21

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### Technology in Education Requirements

**Note:** Equivalent courses from MSU-Bozeman, MSU-Billings and MSU-Northern may substitute. Please consult a Teaching and Learning advisor for approved courses.



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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
C&I 515	Computer/Tchnlgcl Appl in Educ	3
C&I 570	Instructional Technology Found	3
C&I 571	Educ Tech Media	3
C&I 580	Dist Lrng Theory & Implem	3
C&I 581	Plng & Mgt for Tech in Edu	3
C&I 582	Ed Tech Trends & Issues	3
C&I 584	Authentic App Inst Design	3
Total Hours		21

Minimum Required Grade: C-

# Alexander Blewett III School of Law < University of Montana

## Alexander Blewett III School of Law

**Paul Kirgis, Dean**

**Larry Howell, Associate Dean for Academic Affairs**

**Hillary Wandler, Associate Dean of Students**

**Eduardo R. C. Capulong, Associate Dean of Clinical and Experiential Education**

The Law School is accredited by the American Bar Association and the Association of American Law Schools, and offers the degree of Juris Doctor (J.D.). Prerequisites for admission to the Law School are a baccalaureate degree and Law School Admission Test.

For detailed information concerning the Law School's admission criteria, application procedures, facilities, and official course descriptions, consult the Law School Catalog, which may be obtained by calling (406) 243-6169 or visiting the Law School website.

The Law School's administrative regulations are contained in the Law School Student Handbook, which is on the website. The Law School conforms in most instances to the calendar established for the entire University. There are some differences, however, because the Law School operates on a longer semester system than the rest of the University.

## Academic Year Calendar

Access the Law School Academic Calendar on the Law School calendar web page.

## Required Curriculum

FIRST YEAR		HOURS
LAW 500	Civil Procedure I	3
LAW 502	Contracts	4
LAW 504	Law Fund: T&P	1
LAW 505	Law Fund: T & P	2
LAW 506	Law Fund: Research	2
LAW 508	Law Fund: Analysis	1

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LAW 509	Legal Writing	3
LAW 510	Criminal Law	3
LAW 512	Torts	4
LAW 550	Property	4
	Hours	27
<b>SECOND YEAR</b>		
LAW 552	Federal Tax (May be taken Second or Third year)	3
LAW 554	Business Organizations	3
LAW 555	Professional Responsibility	3
LAW 556	Business Transactions	3
LAW 557	Trial Practice	2
LAW 558	Constitutional Law	4
LAW 560	Evidence	3
	Hours	21
<b>THIRD YEAR</b>		
LAW 600	Clinical Trng III	1-6
LAW 601	Clinical Trng IV	1-6
	Hours	0
	Total Hours	48

Plan of Study Grid

## Elective Courses

(Offerings vary year to year)

CODE	TITLE	HOURS
LAW 665	Administrative Law	3

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CODE	TITLE	HOURS
LAW 507	Global Perspectives on Law	5
LAW 511	Criminal Procedure	3
LAW 520	Wild Life Law	3
LAW 522	Domestic Violence	2
LAW 523	Juvenile Justice	2
LAW 524	Legislation: Law & Politics	3
LAW 525	Lawyers Values	3
LAW 533	Civil rights Litigation	2
LAW 530	Climate Change	2
LAW 538	Art & Cultural Property	2
LAW 539	International Environ Law	3
LAW 548	Tax Practice & Procedure	2
LAW 580	Corporate Tax	2
LAW 677	Environmental Law Research	1
LAW 615	Advanced Legal Research	2
LAW 617	Adv Prob Fed Indian Law	3
LAW 604	Adv Constitutional Law	3
LAW 605	Animal Law	2
LAW 607	Law and Literature	1
LAW 608	Adv Leg Res Ac Writing	2
LAW 609	UCC Article 2	2
LAW 613	Nat Res Conflict Resolution	3

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
LAW 614	Alt Dispute Resolution	3
LAW 616	Appellate Advocacy	3
LAW 618	Montana Constitut Law	3
LAW 619	Amer Ind Natural Res Law	3
LAW 621	Bankruptcy	3
LAW 622	Employment Law	3
LAW 624	Insurance Law	3
LAW 625	Gender and the Law	1
LAW 628	Remedies	3
LAW 630	Lawyers' Values	3
LAW 631	Law Practice	2
LAW 634	Public International Law	3
LAW 635	Partnership Tax	2
LAW 637	Healthcare Law	2
LAW 639	Tax of Business Entities	3
LAW 640	Tax of Property Transact	2
LAW 641	Negotiations	2
LAW 643	Am Ind Cult Religion Freedom	3
LAW 644	White Collar Crime	3
LAW 646	State and Local Government	3
LAW 648	Federal Indian Law	3
LAW 650	Intro Envirolaw	3
LAW 651	Oil and Gas Law	3

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<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
LAW 653	Conflict of Laws	2
LAW 654	Public Land & Res Law	3
LAW 655	Taxation of Estates & Gifts	3
LAW 656	Agricultural Law	2
LAW 657	Products Liability	3
LAW 658	Real Estate Transactions	2
LAW 659	Estate Planning	3
LAW 663	Water Law	3
LAW 664	Philosophy of Law	3
LAW 669	Family Law	3
LAW 670	Child Advocacy	2
LAW 671	Federal Courts	2
LAW 672	Alt Dispute Resol Fam Med	3
LAW 678	Renewable Energy	3
LAW 682	Copyright/Trademark Laws	2
LAW 687	Land Use Planning Law	3
LAW 688	Tribal Courts/Tribal Law	3
LAW 691	Indian Child Welfare	1

Course List

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## Department of Public Administration and Policy

**Sara Rinfret, Director**

The University of Montana's Department of Public Administration and Policy is the first of its kind in Montana. The mission of the department is to provide a cutting edge public sector education for our students from high-quality faculty committed to applied research and teaching. Our department offers a variety of degrees: Master of Public Administration, certificates in public policy, nonprofit administration, and public administration, and an undergraduate minor in nonprofit administration. Our department is centrally located within the Alexander Blewett III School of Law's Max S. Baucus Institute. Our faculty offer coursework online, in-person, and via robot.

### Undergraduate Minors

Nonprofit Administration Minor

## Nonprofit Administration Certificate

The Certificate in Nonprofit Administration will prepare students with fundamental skills and knowledge necessary for social impact careers in the nonprofit sector. The 12-credit undergraduate certificate will teach leadership, theory, and unique skill sets in public service and nonprofit administration including fundraising, strategic planning, community organizing, program evaluation, financial management, grant writing, leadership, public policy, theory of social change, etc. Students may enter the certificate program at any point during their undergraduate studies.

### Post-secondary Certificate - Nonprofit Administration

#### Alexander Blewett III School of Law

**Degree Specific Credits:** 12

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Required Courses	12
Total Hours	12

### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NPAD 166	Introduction to Public Service	3
NPAD 267	Leadership and Nonprofit Organizations	3
NPAD 466	Practical Applications in Nonprofit Administration	3
NPAD 467	Advanced Nonprofit Administration	3
Total Hours		12

Minimum Required Grade: C-



# Nonprofit Administration Minor

## Minor - Nonprofit Administration

Alexander Blewett III School of Law

**Degree Specific Credits:** 21

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### Summary

Upper-Division Core Courses	15
Required Courses	
Internship	
Minor Elective Courses	6
Communication Skills Competency	
Youth and Adult Development Competency	
Human Resources Development and Supervision Competency	
Nonprofit Program Planning Competency	
Nonprofit Marketing Competency	
Nonprofit Accounting/Financial Management Competency	
Total Hours	21

### Upper-Division Core Courses

**Rule:** Complete the following subcategories. 9 total credits required.

#### Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NPAD 166	Introduction to Public Service	3
NPAD 267	Leadership and Nonprofits	3
NPAD 466	Practical Applications in Nonprofit Administration	3
NPAD 467	Advanced Nonprofit Admin	3
Total Hours		12

Minimum Required Grade: C-

### Internship

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
NPAD 498	Internship	3
Total Hours		3

Minimum Required Grade: C-

### Degree Elective Courses

**Rule:** Complete 6 credits from at least 2 of the following 6 competency areas. 12 total credits required. May not take more than 1 elective per competency area.

#### Communication Skills Competency

CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
BMGT 420	Leadership and Motivation	
COMX 115S	Introduction to Interpersonal Communications	
COMX 210	Communication in Small Groups	
COMX 415	Intercultural Communication	
COMX 421	Communication in Nonprofit Organizations	
COMX 422	Communication and Technology	
COMX 423	Organizational Communication Consulting and Training	
COMX 424	Risk, Crisis, and Communication	
S W 310	Social and Political Perspectives on Gender and Sexuality	
WGSS 236S	Social and Political Perspectives on Gender and Sexuality	
Total Hours		

Minimum Required Grade: C-

**Youth and Adult Development Competency**

CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
EDEC 410	Family, Community, Culture	
PSYX 230	Developmental Psychology	
PSYX 233	Fund of Psychology of Aging	
SOCI 335	Juvenile Justice System	
SOCI 443	Sociology of Poverty	
Total Hours		

Minimum Required Grade: C-

**Human Resources Development and Supervision Competency**

CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
COMX 220S	Introduction to Organizational Communication	
HTH 465	Leading Health and Human Performance Orgs	
NRSM 422	Natural Resource Policy & Admin	
PSCI 462	Human Resource Management	
PTRM 380	Rec Admin & Leadership	
SOCI 306	Sociology of Work	
Total Hours		

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Minimum Required Grade: C-

**Nonprofit Program Planning Competency**

CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
BGEN 160S	Issues in Sustainability	
ENST 225S	Sustainable Communities	
GBLD 194	Can Giving Change the World?	
PTRM 310	Natural Resource Interpretation	
PTRM 485	Recreation Planning	
Total Hours		

Minimum Required Grade: C-

**Nonprofit Marketing Competency**

CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
BMKT 325	Marketing Principles	
BMKT 412	Non Profit Marketing	
Total Hours		

Minimum Required Grade: C-

**Nonprofit Accounting/Financial Management Competency**

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CODE	TITLE	HOURS
<b>May complete one of the following courses toward the two course elective requirement:</b>		
ACTG 201	Principles of Financial Accounting	3
BGEN 220E	Business Ethics & Social Responsibility	
Total Hours		3

Minimum Required Grade: C-

# The Maureen and Mike Mansfield Library < University of Montana

## The Maureen and Mike Mansfield Library

### **Barry Brown, Interim Dean of Libraries**

The Maureen and Mike Mansfield Library at the University of Montana provides an array of information resources and services in support of the teaching, learning, and research programs of the University. These resources include print collections and access to networked research databases, electronic journals e-books, media materials, and a web-based integrated library cataloging and discovery platform. Library services include in-depth research and reference assistance, an extensive instruction program integrated into the university curriculum, and full-service computing and media facilities. Extensive services for online education students and faculty are available to provide an equitable educational experience.

The Maureen and Mike Mansfield Library comprises the heart of UM s library system. Collections exceed 1.75 million volumes, more than 800,000 electronic books, access to over 75,000 print and electronic journals, an expanding array of electronic databases, over 72,000 media, a federal government depository collection and an Archives and Special Collections. These resources are supplemented by an active interlibrary loan service through which items from other libraries can be loaned to UM students and faculty. The Mansfield Library is open seven days a week for 111 hours per week during the academic semesters.

Over 130 computers available for student use and wireless access throughout the building provides fast and stable internet connectivity in support of access to electronic resources and access to other networked information. Three state-of-the-art instructional classrooms underscore the goal of the library as a learning library in which students learn how to access and evaluate information in support of their advancing academic careers. Study carrels, group study rooms, study tables, and soft seating on all floors of the library provide a variety of study environments.

The Mansfield Library at Missoula College UM (located on the East Campus) supports its curricular programs. Students and faculty at both campuses have access to all library resources and services. Students at Bitterroot College UM, in Hamilton, also have full access to the Mansfield Library's resources and services. The library collections at the affiliated UM campuses are located in Butte at Montana Tech, and Highlands College of Montana Tech; in Dillon at The Carson Library of the University of Montana-Western; and in Helena at Helena College the University of Montana.

## W.A Franke College of Forestry and Conservation

**Chad Bishop, Dean**

**Mike Patterson, Associate Dean**

The undergraduate curricular programs at the W.A Franke College of Forestry and Conservation (FCFC) provide the knowledge and skills for students to become effective natural resource professionals. They offer a sequence of learning experiences that build the necessary confidence and critical thinking capabilities to help solve some of humanity's most pressing problems in the stewardship of our shared natural heritage.

Undergraduate programs at the W.A Franke College of Forestry and Conservation have evolved into a unique action-oriented, interdisciplinary experience where students integrate real-world issues into their coursework. Students will utilize the latest technologies in the assessment and analysis of natural resource challenges, and they will simultaneously apply this learning in multiple field settings across the unparalleled natural settings of Montana.

The undergraduate majors in the College are:

- Forestry
- Geography
- Parks, Tourism, and Recreation Management
- Wildlife Biology
- Environmental Science and Sustainability

These majors provide a strong foundation in knowledge about natural systems, science, analytical skills, and policy, but each is tailored to the specialized needs of a particular career track or research discipline in the natural resources management professions. Students have an opportunity to emphasize the disciplinary concentration of their choosing, but all students will receive a balance of ecological, physical, and social sciences.

Students uncertain about which specific major best meets their interests and needs will find that the ability to move between majors early in their student career is facilitated by a common foundational core of coursework. Each major's curricular program is designed to fulfill the broad educational goals for all graduates of the University of Montana, as well as the specific disciplinary requirements of civil service and professional accrediting organizations.

### Preparation to Enter the W.A Franke College of Forestry and Conservation

Students planning to enter the W.A Franke College of Forestry and Conservation should attain a sound background in English, social studies, mathematics, biology, and other sciences. Entering freshmen and non-resident transfer students will be admitted in accordance with general university admission requirements listed previously in this catalog. Resident transfer students or current UM students wanting to change their major to the W.A Franke College of Forestry and Conservation must have a grade point average of 2.0 or higher to be admitted.



## Educational Framework at the W.A Franke College of Forestry and Conservation

Students at the W.A Franke College of Forestry and Conservation are expected to demonstrate a range of capabilities before graduation so they can better address the multiple demands facing modern natural resource managers. The College fosters learning through a combination of innovative teaching and scholarship with a focus on state of the art knowledge in the major fields and emerging natural resource challenges. Each major's curriculum follows a similar seven part structure that encourages the sequenced development of foundational knowledge, applied skills, and creative problem-solving. The following description illustrates how the curricula are organized to present the most efficient and engaging pathway to the full development of student capabilities.

### Foundations of Science

Students will be required to have a solid understanding of the primary physical, chemical, and biological drivers of natural systems. Required for all students are an introductory course in inorganic chemistry and a basic biological science course (there are several introductory biology classes that will apply, depending on a student's major). Students in the Ecosystem Science and Restoration major and the Forest Operations option within the Forest Management major will also take an introductory course in physics. Parks, Tourism, and Recreation Management majors will take introductory coursework in psychology or sociology to understand social drivers in relation to natural systems. Additionally, all students are encouraged to take one of the four introductory courses offered by the College that draw together multiple disciplines to demonstrate the historical and cultural dimensions of conservation: The Nature of Montana (NRSM 121S); Careers in Natural Resources (WILD 180) or Wildlife and People (WILD 105N). In the sophomore year most students will take an introductory course in soils to become familiar with the cycling of energy and nutrients in terrestrial ecosystems while students in the Wildlife Biology major will take coursework in molecular biology and genetics. In their junior year all students take an upper division ecology class. The University's general education requirements and specific College majors ensure all students take additional natural and social science classes to provide the foundations necessary to understand and manage the natural and social systems underlying human uses of natural resources.

### Quantitative and Analytical Skills

All students at the College will attain the quantitative analytical and measurement foundations needed for their professional or research career path. The freshmen level quantitative requirement rests on a proficiency in mathematics that is obtained through one of two routes depending on major: a college algebra/linear math/probability track or an introductory calculus track. All sophomore students take a statistics class which many fulfill through a special course in the analysis of multiple forms of measurement of natural resource characteristics, called Biometrics. Although not required for all majors, most students decide to take a special course in mapping that combines the common applications of geographic information systems (GIS) and the basic attributes of spatial analysis.

### Applied Field Skills

## University Of Montana

A tremendous advantage of an education at the W.A Franke College of Forestry and Conservation is the proximity of an unlimited field laboratory in both the managed and untrammled landscapes of Montana. All undergraduates will have multiple opportunities to learn in field settings as a part of lab sections associated with many of FCFC's courses. Some specific academic opportunities, such as the College's Wilderness and Civilization Program, will take students on extended backcountry trips to gain first-hand knowledge of wild settings. Exceptional hands-on learning experiences are provided at the College's Lubrecht Experimental Forest located less than 30 miles from campus on the Blackfoot River. Since students must demonstrate competency and confidence in outdoor field work to be a successful natural resource professional, students are required to select a sophomore-level field measurements course within their major. Although advanced transfer students (>59 transfer credits) to the College; Parks, Tourism, and Recreation Students; and Wildlife Biology students may apply other relevant experiences to their field training requirement, completion of a field measurements course is expected before students may enroll in upper division courses, as the needed skills to succeed in subsequent, more advanced field labs depend on a solid core of field capabilities.

## Communication

Effectiveness in addressing our shared problems in natural resource management depends on a person's ability to communicate. W.A Franke College of Forestry and Conservation students will graduate with considerable training in written communication with both lower-division requirements at the 200-level and a series of upper division courses where writing constitutes the major part of course expectations. Each major in the College provides a "distributed writing" menu for students entering into upper-division courses, such that each student will take at least three classes where writing skills are evaluated. All students take a public speaking class. Students wishing to gain more experience in public speaking and communication can also take a special class Natural Resources Interpretation (PTRM 310 ).

## Professional Specialization

Each academic major in the College contains a sequence of courses and learning experiences tailored to the student's specific professional aspirations. Clusters of courses within a major prepare students to obtain the necessary knowledge and professional competencies to perform the tasks of a modern resource manager or research scientist. Course work combines biophysical and social science training to allow students to recognize and navigate the complexities and context of conservation sciences and natural resources management. Thus, each major has courses representing both ecological and policy development processes, as well as a progression of classes covering the knowledge areas and topics of major natural resources disciplines. Students will take a core of required courses (described in the sections below) as well as a balanced selection of "professional electives" to acquire sufficient balance and depth in their chosen field to emerge with an identified professional specialty.

## Work Experience and Service Learning

Students at the W.A Franke College of Forestry and Conservation will apply what they have learned in real-world settings prior to graduation. This work experience can be obtained in many ways, via internships, summer employment, study abroad opportunities, or specially designed "service learning" courses. Service experiences will allow students to obtain credit, learn new material, and offer critical work to established

## University Of Montana

organizations to advance conservation goals. In general, requirements for work experience or internships will be counted based on the number of hours worked over the course of a student's entire undergraduate career, with 400 hours or more of work necessary for graduation.

## Capstone Experience

Each academic major in the College offers an opportunity for students to synthesize previous learning in a real-world project via either an undergraduate research project or the completion of a special, integrative "capstone" course. Undergraduate research projects are designed through close supervision of a student's academic advisor, while the capstone courses bring together a team of faculty who facilitate student oriented problem solving through a focus on an applied management problem or real world case studies that offer vital experience in the preparation of students for their professional careers.

## Other University-wide Requirements for Academic Achievement

The University of Montana has established standards for graduation of all students that include demonstrated proficiencies in oral and written communication and symbolic systems as well as a selection of diverse learning experiences identified as "general education courses." The College's expectations for writing and quantitative skills more than fulfill university-wide requirements for communication and symbolic systems, and many of the courses offered by FCFC also fulfill the categories within general education requirements. All FCFC majors also offer sufficient opportunity for students to choose among the full range of UM courses as "free electives," such that each person might be able to explore new areas of learning at their own discretion.

## Student Advising

All W.A Franke College of Forestry and Conservation students will have a full-time faculty advisor as well as the extensive advising support provided by the College's Office of Student Services. Students are paired with a faculty advisor who matches their academic and professional interests and serves as a mentor and advocate for students as they progress through individual academic achievements. Students may change their advisor at any time as their specific interests develop or change. New students needing an advisor and current students who wish to change advisors should contact the College's Office of Student Services. Students are required to consult with their advisors before each registration period but remain responsible for ensuring they fulfill the published requirements for graduation.

## Graduation Auditing

All students will complete a graduation audit in the semester prior to their graduation to make sure that they have a sure pathway for successful completion of their chosen major.

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# **Environmental Science and Sustainability B.S.**

## **Bachelor of Science - Environmental Science and Sustainability**

**W.A Franke College of Forestry & Conservation**

**Degree Specific Credits: 65-95**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

## **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

## **Summary**

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Lower-Division Required Courses		14-15
Social Science Requirement		3
Policy Requirement		3
Ecology Requirement		3
Ethics Requirement		3
Experiential Learning Requirement		
Concentration		36-59
Climate Science and Environmental Change		
Ecosystem Science and Restoration		
Environmental Policy and Planning		
Resource Conservation		
Sustainable Livelihoods and Communities		
Water Resources		
Upper-Division Writing Requirement		3-9
Total Hours		65 - 95

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Social Science Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
NRSM 326	Climate and Society	
NRSM 379	Collab in Nat Res Decisions	
NRSM 424	Community Forestry & Conservtn	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
Total Hours		<b>3</b>

Minimum Required Grade: C-

### Policy Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 422	Nat Res Policy/Administration	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		<b>3</b>

Minimum Required Grade: C-

### Ecology Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

### Ethics Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 349E	Climate Change Ethics/Policy	3
or NRSM 389E	Ethics and Sustainability	3
Total Hours		3

Minimum Required Grade: C-

### Experiential Learning Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	



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BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	
FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	
NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	
PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	
Total Hours		3

Minimum Required Grade: C-

## Concentrations

**Rule:** Must complete one of the following concentrations.

### Climate Science and Environmental Change

The Climate Science and Environmental Change concentration provides students with an understanding of climate science, interactions between climate and ecosystems, and the intersections of climate, society, and policy.

**Rule:** Complete all of the following subcategories. 47-48 total credits required.

#### Foundations

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CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
CCS 103X	Climate Change Science and Society	3
<b>Mathematics Requirement - Complete one of the following:</b>		
M 122	College Trigonometry	3-4
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Physics Requirement - Complete all of the following courses:</b>		
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Lab	1
Total Hours		14-15

Minimum Required Grade: C-

**Climate Science**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ERTH 303N	Weather and Climate	3
NRSM 281	Science of Climate Change	3
NRSM 408	Global Cycles and Climate	3
NRSM 418	Ecosystem Climatology	3
Total Hours		12

Minimum Required Grade: C-

**Environmental Change**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FORS 230	Fire Management and Environmental Change	3
FORS 333	Fire Ecology	3
NRSM 385	Watershed Hydrology	3
Total Hours		9

Minimum Required Grade: C-

**Climate and Society A**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 326	Climate and Society	3
NRSM 349E	Climate Ethics and Policy	3
Total Hours		6

Minimum Required Grade: C-

**Climate and Society B**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 349	Communication, Consumption, and Climate	
ECNS 445	Intro to Environmental Economics & Climate Change	
ENST 427	Social Issues: The Mekong Delta	
NPAD 191	Nonprofit Administration Special Topics Course	
PHIL 112E	Intro Ethics and Environment	
Total Hours		3

Minimum Required Grade: C-

### Climate Solutions

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BGEN 160S	Issues in Sustainability	
BGEN 445	Sustainability Reporting	
BMGT 410	Sustainable Business Practices	
ENST 391	Special Topics/Experimental Course	
ENST 437	Climate Change: Mekong Delta	
GPHY 421	Sustainable Cities	
NRSM 321	Field Stds Energy Syst Montana	
Total Hours		3

Minimum Required Grade: C-

### Ecosystem Science and Restoration

The Ecosystem Science and Restoration concentration spans the range of ecology from microbial to global scales and includes basic and applied science. Students will focus on learning about how ecosystems work, solving pressing environmental problems, and/or helping to restore degraded ecosystems. In the ESR

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concentration, students can focus on either aquatic or terrestrial ecosystems and tailor their capstone experience to best fit their interests and career path.

**Rule:** Complete all of the following subcategories. 56-59 total credits required.

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Principles of Living Systems Lab	1
BIOB 260	Cellular & Molecular Biology	4
BIOB 272	Genetics & Evolution	4
CHMY 123	Introduction to Organic & Biochemistry	4
M 162	Applied Calculus	4
NRSM 265	Elements of Ecological Restoration	3
<b>Complete one of the following:</b>		
GEO 101N	Introduction to Physical Geology	3-4
and GEO 102N	Introduction to Physical Geology Lab	
GEO 103N	Introduction to Environmental Geology	
and GEO 104N	Introduction to Environmental Geology Lab	
BIOO 105N	Introduction to Botany	
Total Hours		26-27

Minimum Required Grade: C-

### Upper-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 370	General Ecology	3
BIOE 428	Freshwater Ecology	3 - 5
or BIOO 335	Rocky Mountain Flora	
NRSM 344	Ecosystem Science and Restoration Capstone	5
NRSM 385	Watershed Hydrology	3
NRSM 465	Restoration Ecology	3
or BIOE 447	Ecosystem Ecology	
NRSM 494	Seminar in Ecosystem Science and Restoration	1
NRSM 495 or 498 or 499	Practicum, Internship, or Senior Thesis	3
Total Hours		21-23

Minimum Required Grade: C-

**ESR Natural Science Electives**

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 416	Alpine Ecology	
BIOE 447	Terrestrial Ecosystem Ecology	
BIOE 448	Terrestrial Plant Ecology	
BIOE 451	Landscape Ecology	
BIOE 458	Forest and Fire Ecology	
BIOO 320	General Botany	
BIOO 340	Biology & Management of Fishes	
BIOO 433	Plant Physiology	
ERTH 303N	Weather and Climate	

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FORS 202	Forest Mensuration	
FORS 250	Intro to GIS	
FORS 330	Forest Ecology	
FORS 331	Wildland Fuels Management	
FORS 333	Fire Ecology	
FORS 347	Silviculture	
FORS 462	Range Ecology	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 346	Earth's Changing Climate	
GEO 460	Process Geomorphology	
GPHY 317	Geomorphology	
NRSM 360	Rangeland Management	
NRSM 408	Global Cycles and Climate	
NRSM 415	Environmental Soil Science	
NRSM 418	Ecosystem Climatology	
NRSM 462	Range Ecology	
NRSM 465	Restoration Ecology	
WILD 470	Conservation of Wildlife Populations	
WILD 485	Aquatic Macroinvertebrate Ecology	
Total Hours		9

Minimum Required Grade: C-

**Environmental Policy and Planning**



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The Environmental Policy and Planning concentration focuses on policy and planning processes at multiple scales. Students are introduced to real-world environmental problems and the policy and planning approaches, strategies, and tools that can be used to deal with them. Coursework covers U.S. public lands, water, and wildlife policy; community, regional, and federal lands planning; conflict resolution and collaboration; markets and economic incentives; and political institutions and processes.

**Rule:** Complete all of the following subcategories. 42-44 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete all of the following courses:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
GPHY 465	Planning Principles & Processes	3
NRSM 349E	Climate Change Ethics/Policy	3
NRSM 379	Collaboration in Natural Resource Decisions	3

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NRSM 422	Natural Resource Policy & Administration	3
PSCI 210S	Intro to American Government	3
PSCI 361	Public Administration	3
Total Hours		27-29

Minimum Required Grade: C-

**Policy and Law Requirement**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
ENST 382	Environmental Law	
GPHY 335	Water Policy	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy	
Total Hours		6

Minimum Required Grade: C-

**Planning Requirement**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
FORS 481	Forest Planning	
GPHY 466	Environmental Planning	
PTRM 485	Recreation Planning	
Total Hours		6

Minimum Required Grade: C-

**Economics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ECNS 433	Economics of the Environment	
FORS 320	Forest Economics	
GPHY 323	Economics of Rural Areas	
Total Hours		3

Minimum Required Grade: C-

## Resource Conservation

The Resource Conservation concentration provides students with the flexibility to design their own emphasis or to focus more generally on natural resource management and conservation. Students in this concentration complete the ESS core as well as the math, biology, and GIS courses outlined below, and then work with their faculty advisor to select additional coursework based on their interests and professional goals.

**Rule:** Complete all of the following subcategories. 55-57 total credits required.

### Core Courses

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CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete the following course:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
Total Hours		9-11

Minimum Required Grade: C-

**Required Courses**

**Note:** Students in the Resource Conservation option should work closely with their faculty advisor to select courses that align with their interests and professional goals.

CODE	TITLE	HOURS
<b>Complete 36 credits of courses with the following course prefixes:</b>		36
FORS	Forestry	
GPHY	Geography	
NRSM	Natural Resource Management	
PTRM	Parks, Tourism & Recreation Management	
WILD	Fish, Wildlife Science & Management	
Total Hours		36

Minimum Required Grade: C-

**Additional Requirements in Area of Emphasis**

**Note:** Alternatively, students can take two semesters of a foreign language or otherwise demonstrate foreign language proficiency.

CODE	TITLE	HOURS
<b>Complete 10 credits of courses with the following course prefixes:</b>		10
BIOE	Biology - Ecological	
BIOO	Biology - Organismal	
CHMY	Chemistry	
ENSC	Environmental Science	
ENST	Environmental Studies	
FORS	Forestry	
GEO	Geoscience	
M	Mathematics	
NRSM	Natural Resource Management	
PHSX	Physics	
WILD	Fish, Wildlife Science & Management	
Total Hours		10

Minimum Required Grade: C-

## Sustainable Livelihoods and Communities

The Sustainable Livelihoods and Communities concentration provides students with an understanding of key social and institutional processes involved in transitioning to sustainable economies from global to local levels. Courses address the intersections between environment and development, natural resource governance and collaboration, and pathways to sustainability.

**Rule:** Complete all of the following subcategories. 36-38 total credits required.

### Core Courses

University Of Montana

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete the following course:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
Total Hours		9-11

Minimum Required Grade: C-

**Electives**

CODE	TITLE	HOURS
<b>Complete 5 of the following courses:</b>		15
ENST 225S	Sustainable Communities	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 421	Sustainable Cities	
GPHY 433	Community Resilience	
NRSM 379	Collaboration in Natural Resource Decisions	
NRSM 424	Community Forestry & Conservation	
NRSM 475	Environment & Development	
PTRM 451	Tourism and Sustainability	
Total Hours		15

Minimum Required Grade: C-

**Additional Electives**



CODE	TITLE	HOURS
<b>Complete 4 of the following courses:</b>		12
BGMT 410	Sustainable Business Practices	
ECNS 433	Economics of the Environment	
ENST 480	Food Justice and Sustainability	
FORS 320	Forest Economics	
GPHY 468	Community & Regional Analysis	
PTRM 210	Nature-Based Tourism	
SOCI 270	Intro to Development Sociology	
SOCI 443	Sociology of Poverty	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
Total Hours		12

Minimum Required Grade: C-

## Water Resources

The Water Resources concentration prepares students for careers and/or graduate study related to watershed hydrology, water policy, and other aspects of water resources governance and management. Coursework focuses on technical training in fundamental sciences such as physics, chemistry, and biology; more specialized training in hydrology, hydrogeology, geomorphology, and soil science; and the social and political context of water use, allocation, conservation, and management, both with regard to water quality and water quantity issues. Students who complete this concentration will satisfy the education requirements for the Hydrology Series (1315) and Hydrologic Technician Series (1316) civil service qualifications.

**Rule:** Complete all of the following subcategories. 42-46 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		4
M 171	Calculus I	

or M 172	Calculus II	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOC 105N	Introduction to Botany	
<b>Geology Requirement - Complete one of the following sequences:</b>		4
GEO 101N	Introduction to Physical Geology	
and GEO 102N	Introduction to Physical Geology Lab	
or		
GEO 103N	Introduction to Environmental Geology	
and GEO 104N	Introduction to Environmental Geology Lab	
<b>Complete all of the following courses:</b>		
GPHY 335	Water Policy	3
NRSM 210N	Soils, Water, Climate	3
NRSM 385	Watershed Hydrology	3
NRSM 427	Advanced Water Policy	3
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Lab	1
PHSX 207N	College Physics II	4

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PHSX 208N	College Physics II Lab	1
Total Hours		33-34

Minimum Required Grade: C-

**Physical Science Course**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
GEO 320	Global Water	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 460	Process Geomorphology	
Total Hours		3-4

Minimum Required Grade: C-

**Biological Science Course**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-5
BIOE 447	Ecosystem Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
GPHY 474	Remote Sensing for Freshwater Ecology	
WILD 485	Aquatic Invertebrate Ecology	
Total Hours		3-5

Minimum Required Grade: C-

**Additional Required Course**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3
ERTH 303N	Weather and Climate	
FORS 341	Timber Harvesting and Roads	
FORS 434	Advanced Forest Roads	
GPHY 317	Geomorphology	
NRSM 415	Environmental Soil Science	
Total Hours		3

Minimum Required Grade: C-

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## Upper-Division Writing Requirement

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Climate Science and Environmental Change

The Climate Science and Environmental Change concentration provides students with an understanding of climate science, interactions between climate and ecosystems, and the intersections of climate, society, and policy.

### Bachelor of Science - Environmental Science and Sustainability; Climate Science and Environmental Change Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 67-69**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		50-51
Experiential Learning Requirement		3
Total Hours		67-69

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Climate Science and Environmental Change Concentration Requirements

**Rule:** Complete all of the following subcategories. 47-48 total credits required.

### Foundations

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CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
CCS 103X	Climate Change Science and Society	3
<b>Mathematics Requirement - Complete one of the following:</b>		
M 122	College Trigonometry	3-4
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Physics Requirement - Complete all of the following courses:</b>		
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Lab	1
Total Hours		14-15

Minimum Required Grade: C-

**Climate Science**



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ERTH 303N	Weather and Climate	3
NRSM 281	Science of Climate Change	3
NRSM 408	Global Cycles and Climate	3
NRSM 418	Ecosystem Climatology	3
Total Hours		12

Minimum Required Grade: C-

**Environmental Change**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FORS 230	Fire Management and Environmental Change	3
FORS 333	Fire Ecology	3
NRSM 385	Watershed Hydrology	3
Total Hours		9

Minimum Required Grade: C-

**Climate and Society A**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 326	Climate and Society	3
NRSM 349E	Climate Ethics and Policy	3
Total Hours		6

Minimum Required Grade: C-

**Climate and Society B**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
COMX 349	Communication, Consumption, and Climate	
ECNS 445	Intro to Environmental Economics & Climate Change	
ENST 427	Social Issues: The Mekong Delta	
NPAD 191	Nonprofit Administration Special Topics Course	
PHIL 112E	Intro Ethics and Environment	
Total Hours		3

Minimum Required Grade: C-

### Climate Solutions

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BGEN 160S	Issues in Sustainability	
BGEN 445	Sustainability Reporting	
BMGT 410	Sustainable Business Practices	
ENST 391	Special Topics/Experimental Course	
ENST 437	Climate Change: Mekong Delta	
GPHY 421	Sustainable Cities	
NRSM 321	Field Stds Energy Syst Montana	
Total Hours		3

Minimum Required Grade: C-

### Policy

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 422	Nat Res Policy/Administration	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		3

Minimum Required Grade: C-

### Experiential Learning Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	
FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	

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NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	
PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	
Total Hours		3

Minimum Required Grade: C-

**Upper-Division Writing Requirement**

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Ecosystem Science and Restoration

The Ecosystem Science and Restoration concentration spans the range of ecology from microbial to global scales and includes basic and applied science. Students will focus on learning about how ecosystems work, solving pressing environmental problems, and/or helping to restore degraded ecosystems. In the ESR concentration, students can focus on either aquatic or terrestrial ecosystems and tailor their capstone experience to best fit their interests and career path.

### Bachelor of Science - Environmental Science and Sustainability; Ecosystem Science and Restoration Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 79-83**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		65-68
Total Hours		79-83

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Ecosystem Science and Restoration Concentration Requirements

**Rule:** Complete all of the following subcategories. 56-59 total credits required.

### Lower-Division Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Principles of Living Systems Lab	1
BIOB 260	Cellular & Molecular Biology	4
BIOB 272	Genetics & Evolution	4
CHMY 123	Introduction to Organic & Biochemistry	4
M 162	Applied Calculus	4
NRSM 265	Elements of Ecological Restoration	3
<b>Complete one of the following:</b>		
GEO 101N	Introduction to Physical Geology	3-4
and GEO 102N	Introduction to Physical Geology Lab	
GEO 103N	Introduction to Environmental Geology	
and GEO 104N	Introduction to Environmental Geology Lab	
BIOO 105N	Introduction to Botany	
Total Hours		26-27

Minimum Required Grade: C-

**Upper-Division Required Courses**



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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 370	General Ecology	3
BIOE 428	Freshwater Ecology	3 - 5
or BIOO 335	Rocky Mountain Flora	
NRSM 344	Ecosystem Science and Restoration Capstone	5
NRSM 385	Watershed Hydrology	3
NRSM 465	Restoration Ecology	3
or BIOE 447	Ecosystem Ecology	
NRSM 494	Seminar in Ecosystem Science and Restoration	1
NRSM 495 or 498 or 499	Practicum, Internship, or Senior Thesis	3
Total Hours		21-23

Minimum Required Grade: C-

**Social Science Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 326	Climate and Society	
NRSM 379	Collab in Nat Res Decisions	
NRSM 424	Community Forestry & Conservtn	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
Total Hours		3

Minimum Required Grade: C-

**Policy Requirement**

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 422	Nat Res Policy/Administration	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		3

Minimum Required Grade: C-

**Ethics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 349E	Climate Change Ethics/Policy	
or NRSM 389E	Ethics and Sustainability	
Total Hours		3

Minimum Required Grade: C-

**ESR Natural Science Electives**

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 416	Alpine Ecology	
BIOE 447	Terrestrial Ecosystem Ecology	
BIOE 448	Terrestrial Plant Ecology	
BIOE 451	Landscape Ecology	
BIOE 458	Forest and Fire Ecology	
BIOO 320	General Botany	
BIOO 340	Biology & Management of Fishes	

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BIOO 433	Plant Physiology	
ERTH 303N	Weather and Climate	
FORS 202	Forest Mensuration	
FORS 250	Intro to GIS	
FORS 330	Forest Ecology	
FORS 331	Wildland Fuels Management	
FORS 333	Fire Ecology	
FORS 347	Silviculture	
FORS 462	Range Ecology	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 346	Earth's Changing Climate	
GEO 460	Process Geomorphology	
GPHY 317	Geomorphology	
NRSM 360	Rangeland Management	
NRSM 408	Global Cycles and Climate	
NRSM 415	Environmental Soil Science	
NRSM 418	Ecosystem Climatology	
NRSM 462	Range Ecology	
NRSM 465	Restoration Ecology	
WILD 470	Conservation of Wildlife Populations	
WILD 485	Aquatic Macroinvertebrate Ecology	
Total Hours		9

Minimum Required Grade: C-

## Upper-Division Writing Requirement

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Environmental Policy and Planning

The Environmental Policy and Planning concentration focuses on policy and planning processes at multiple scales. Students are introduced to real-world environmental problems and the policy and planning approaches, strategies, and tools that can be used to deal with them. Coursework covers U.S. public lands, water, and wildlife policy; community, regional, and federal lands planning; conflict resolution and collaboration; markets and economic incentives; and political institutions and processes.

### Bachelor of Science - Environmental Science and Sustainability; Environmental Policy and Planning Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 62-65

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		45-47
Experiential Learning Requirement		3
Total Hours		62-65

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Environmental Policy and Planning Concentration Requirements

**Rule:** Complete all of the following subcategories. 45-47 total credits required.

### Required Courses

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CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete all of the following courses:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
GPHY 465	Planning Principles & Processes	3
NRSM 349E	Climate Change Ethics/Policy	3
NRSM 379	Collaboration in Natural Resource Decisions	3
NRSM 422	Natural Resource Policy & Administration	3
PSCI 210S	Intro to American Government	3
PSCI 361	Public Administration	3
Total Hours		27-29

Minimum Required Grade: C-

**Policy and Law Requirement**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
ENST 382	Environmental Law	
GPHY 335	Water Policy	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy	
Total Hours		6

Minimum Required Grade: C-

**Planning Requirement**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
FORS 481	Forest Planning	
GPHY 466	Environmental Planning	
PTRM 485	Recreation Planning	
Total Hours		6

Minimum Required Grade: C-

**Economics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ECNS 433	Economics of the Environment	
FORS 320	Forest Economics	
GPHY 323	Economics of Rural Areas	
Total Hours		3

Minimum Required Grade: C-

**Ecology Requirement**



CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

### Experiential Learning Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	

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FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	
NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	
PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	
Total Hours		3

Minimum Required Grade: C-

**Upper-Division Writing Requirement**

University Of Montana

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Resource Conservation

The Resource Conservation concentration provides students with the flexibility to design their own emphasis or to focus more generally on natural resource management and conservation. Students in this concentration complete the ESS core as well as the math, biology, and GIS courses outlined below, and then work with their faculty advisor to select additional coursework based on their interests and professional goals.

### Bachelor of Science - Environmental Science and Sustainability; Resource Conservation Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 84-87**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		67-69
Experiential Learning Requirement		3
Total Hours		84-87

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Resource Conservation Concentration Requirements

The Resource Conservation concentration provides students with the flexibility to design their own emphasis or to focus more generally on natural resource management and conservation. Students in this concentration complete the ESS core as well as the math, biology, and GIS courses outlined below, and then work with their faculty advisor to select additional coursework based on their interests and professional goals.

**Rule:** Complete all of the following subcategories. 55-57 total credits required.

### Core Courses

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete the following course:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
Total Hours		9-11

Minimum Required Grade: C-

**Required Courses**

**Note:** Students in the Resource Conservation option should work closely with their faculty advisor to select courses that align with their interests and professional goals.

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CODE	TITLE	HOURS
<b>Complete 36 credits of courses with the following course prefixes:</b>		36
FORS	Forestry	
GPHY	Geography	
NRSM	Natural Resource Management	
PTRM	Parks, Tourism & Recreation Management	
WILD	Fish, Wildlife Science & Management	
Total Hours		36

Minimum Required Grade: C-

**Social Science Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 326	Climate and Society	
NRSM 379	Collab in Nat Res Decisions	
NRSM 424	Community Forestry & Conservtn	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
Total Hours		3

Minimum Required Grade: C-

**Policy Requirement**

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 422	Nat Res Policy/Administration	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		3

Minimum Required Grade: C-

**Ecology Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

**Ethics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 349E	Climate Change Ethics/Policy	3
or NRSM 389E	Ethics and Sustainability	3
Total Hours		3

Minimum Required Grade: C-



**Additional Requirements in Area of Emphasis**

**Note:** Alternatively, students can take two semesters of a foreign language or otherwise demonstrate foreign language proficiency.

CODE	TITLE	HOURS
<b>Complete 10 credits of courses with the following course prefixes:</b>		10
BIOE	Biology - Ecological	
BIOO	Biology - Organismal	
CHMY	Chemistry	
ENSC	Environmental Science	
ENST	Environmental Studies	
FORS	Forestry	
GEO	Geoscience	
M	Mathematics	
NRSM	Natural Resource Management	
PHSX	Physics	
WILD	Fish, Wildlife Science & Management	
Total Hours		10

Minimum Required Grade: C-

**Experiential Learning Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	

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BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	
FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	
NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	
PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	

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Total Hours	3
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Minimum Required Grade: C-

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## Upper-Division Writing Requirement

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Sustainable Livelihoods and Communities

The Sustainable Livelihoods and Communities concentration provides students with an understanding of key social and institutional processes involved in transitioning to sustainable economies from global to local levels. Courses address the intersections between environment and development, natural resource governance and collaboration, and pathways to sustainability.

### Bachelor of Science - Environmental Science and Sustainability; Sustainable Livelihoods and Communities Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 65-69**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		48-51
Experiential Learning Requirements		3
Total Hours		65-69

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Sustainable Livelihoods and Communities Concentration Requirements

**Rule:** Complete all of the following subcategories. 36-38 total credits required.

### Core Courses

University Of Montana

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		3-4
M 115	Probability and Linear Mathematics	
or M 121	College Algebra	
or M 122	College Trigonometry	
or M 151	Precalculus	
or M 162	Applied Calculus	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOO 105N	Introduction to Botany	
<b>Complete the following course:</b>		
FORS 250	Intro to GIS for Forest Mgt	3
Total Hours		9-11

Minimum Required Grade: C-

**Social Science Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 326	Climate and Society	
NRSM 379	Collab in Nat Res Decisions	
NRSM 424	Community Forestry & Conservtn	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
Total Hours		3

Minimum Required Grade: C-

**Policy Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 422	Nat Res Policy/Administration	
NRSM 427	Advanced Water Policy	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		3

Minimum Required Grade: C-

**Ecology Requirement**



CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

**Ethics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 349E	Climate Change Ethics/Policy	3
or NRSM 389E	Ethics and Sustainability	3
Total Hours		3

Minimum Required Grade: C-

**Electives**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete 5 of the following courses:</b>		15
ENST 225S	Sustainable Communities	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 421	Sustainable Cities	
GPHY 433	Community Resilience	
NRSM 379	Collaboration in Natural Resource Decisions	
NRSM 424	Community Forestry & Conservation	
NRSM 475	Environment & Development	
PTRM 451	Tourism and Sustainability	
Total Hours		15

Minimum Required Grade: C-

**Additional Electives**

CODE	TITLE	HOURS
<b>Complete 4 of the following courses:</b>		12
BGMT 410	Sustainable Business Practices	
ECNS 433	Economics of the Environment	
ENST 480	Food Justice and Sustainability	
FORS 320	Forest Economics	
GPHY 468	Community & Regional Analysis	
PTRM 210	Nature-Based Tourism	
SOCI 270	Intro to Development Sociology	
SOCI 443	Sociology of Poverty	
SOCI 470	Environmental Sociology	
SOCI 471	Gender and Global Development	
Total Hours		12

Minimum Required Grade: C-

### Experiential Learning Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	

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BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	
FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	
NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	
PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	
Total Hours		3

Minimum Required Grade: C-

**Upper-Division Writing Requirement**

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Environmental Science and Sustainability B.S. - Water Resources

The Water Resources concentration prepares students for careers and/or graduate study related to watershed hydrology, water policy, and other aspects of water resources governance and management. Coursework focuses on technical training in fundamental sciences such as physics, chemistry, and biology; more specialized training in hydrology, hydrogeology, geomorphology, and soil science; and the social and political context of water use, allocation, conservation, and management, both with regard to water quality and water quantity issues. Students who complete this concentration will satisfy the education requirements for the Hydrology Series (1315) and Hydrologic Technician Series (1316) civil service qualifications.

### Bachelor of Science - Environmental Science and Sustainability; Water Resources Concentration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 68-73**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Lower-Division Required Courses		14-15
Concentration Requirements		51-55
Experiential Learning Requirement		3
Total Hours		68-73

### Lower-Division Required Courses

**Note:** NRSM 110 will not be required if students declare the major with 60+ credits.

CODE	TITLE	HOURS
<b>Complete the following courses:</b>		
NRSM 110	First Year Seminar in Environmental Science and Sustainability	1
NRSM 210N	Soils, Water and Climate	
<b>Oral Communication - Complete one of the following courses:</b>		3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
<b>Statistics Requirement - Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
or STAT 216	Introduction to Statistics	
or WILD 240	Intro to Biostatistics	
<b>Chemistry - Complete the following course:</b>		
CHMY 121N	Introduction to General Chemistry	4
Total Hours		14-15

Minimum Required Grade: C-

## Water Resources Concentration Requirements

**Rule:** Complete all of the following subcategories. 42-46 total credits required.

### Required Courses

CODE	TITLE	HOURS
<b>Mathematics Requirement - Complete one of the following:</b>		4
M 171	Calculus I	

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or M 172	Calculus II	
<b>Biology Requirement - Complete one of the following:</b>		3-4
BIOB 160N	Principles of Living Systems	
or BIOB 170N	Principles Biological Diversity	
or BIOE 172N	Introductory Ecology	
or BIOC 105N	Introduction to Botany	
<b>Geology Requirement - Complete one of the following sequences:</b>		4
GEO 101N	Introduction to Physical Geology	
and GEO 102N	Introduction to Physical Geology Lab	
or		
GEO 103N	Introduction to Environmental Geology	
and GEO 104N	Introduction to Environmental Geology Lab	
<b>Complete all of the following courses:</b>		
GPHY 335	Water Policy	3
NRSM 210N	Soils, Water, Climate	3
NRSM 385	Watershed Hydrology	3
NRSM 427	Advanced Water Policy	3
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Lab	1
PHSX 207N	College Physics II	4
PHSX 208N	College Physics II Lab	1



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Total Hours	33-34
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Minimum Required Grade: C-

**Social Science Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 326	Climate and Society	
NRSM 379	Collab in Nat Res Decisions	
NRSM 424	Community Forestry & Conservtn	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
Total Hours		3

Minimum Required Grade: C-

**Ecology Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

**Ethics Requirement**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 349E	Climate Change Ethics/Policy	3
or NRSM 389E	Ethics and Sustainability	3
Total Hours		3

Minimum Required Grade: C-

**Physical Science Course**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
GEO 320	Global Water	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 460	Process Geomorphology	
Total Hours		3-4

Minimum Required Grade: C-

**Biological Science Course**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-5
BIOE 447	Ecosystem Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
GPHY 474	Remote Sensing for Freshwater Ecology	
WILD 485	Aquatic Invertebrate Ecology	
Total Hours		3-5

Minimum Required Grade: C-

#### Additional Required Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ERTH 303N	Weather and Climate	
FORS 341	Timber Harvesting and Roads	
FORS 434	Advanced Forest Roads	
GPHY 317	Geomorphology	
NRSM 415	Environmental Soil Science	
Total Hours		3

Minimum Required Grade: C-

#### Experiential Learning Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3

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BIOE 342	Field Ecology	
BIOE 400	Aquatic Microbial Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
ENST 427	Social Issues: The Mekong Delta	
ENST 437	Climate Change: Mekong Delta	
FORS 130	Intro Forestry Field Skills	
FORS 440	Forest Stand Management	
GPHY 385	Field Techniques	
NRSM 115	First Year Seminar in Field Studies in Conservation	
NRSM 273	Wilderness/Civ Field Stds	
NRSM 298	Internship	
NRSM 345	Watershed Dynamics	
NRSM 398	Internship	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 498	Internship	
NRSM 499	Senior Thesis	
PTRM 150	First Year Seminar in Parks, Tourism, and Recreation Management	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 418	Winter Wilderness Field Studies	

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PTRM 484	PTRM Field Measurement Tech	
WILD 374	Hunter Check Station	
Total Hours		3

Minimum Required Grade: C-

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## Upper-Division Writing Requirement

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CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
FORS 499	Senior Thesis	
NASX 403	Contmp Tribal Resource Issues	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 465	Foundations of Restoration Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
NRSM 499	Senior Thesis	
PTRM 300	Recreation Behavior	
WILD 410	Wildlife Policy & Biopolitics	
Total Hours		9

Minimum Required Grade: C-

## Forestry B.S.

### David Affleck, Chair

The B.S. in Forestry prepares students to be leaders in the stewardship of forest resources, from water to wildlife to wood products. Through field and classroom experiences, students gain expertise in the core biophysical and ecological processes that shape forested landscapes, and synthesize this knowledge with socio-economic principles to effectively manage, conserve, and restore natural resources.

The program uses the unique natural settings offered in Montana to give students classroom and field learning experiences with skills-based courses, independent studies, internships and research projects that lead to diverse employment opportunities.

With a degree in Forestry students can work as forest ecologists, silviculturalists, timber managers, forest planners, wildland fire specialists, inventory managers, forest rangers, or as range or soil conservationists. The Forestry degree is accredited by the Society of American Foresters and meets the requirements for qualification as Forester for the U.S. Civil Service Commission (440 series). This means student can work as a forester for federal agencies such as the U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs as well as for many state agencies and with private industry. View more information on civil service requirements.

## Bachelor of Science - Forestry

### W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 91-96

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

## Summary

CODE	TITLE	HOURS
Lower-Division Major Required Courses		20
Lower-Division Outside Major Required Courses		23-26
Upper-Division Major Required Courses		28
Professional Electives		15
Upper-Division Writing Requirement		
Total Hours		86-89

### Lower-Division Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FORS 130	Intro Forestry Field Skills	2
FORS 202	Forest Mensuration	3
FORS 230	Fire Management & Environmental Change	3
FORS 232	Forest Insects & Diseases	3
FORS 241N	Dendrology	3
FORS 250	Intro to GIS for Forest Mgt	3
NRSM 210N	Soils, Water and Climate	3
Total Hours		20

Minimum Required Grade: C-

### Lower-Division Outside Major Required Courses



CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOO 105N	Introduction to Botany	3
BIOB 160N	Principles of Living Systems	3
CHMY 121N	Introduction to General Chemistry	4
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
ECNS 201S	Principles of Microeconomics	3
<b>Complete one of the following two options:</b>		4-6
M 151	Precalculus	
M 121 & M 122	College Algebra and College Trigonometry	
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
STAT 216	Introduction to Statistics	
Total Hours		23-26

Minimum Required Grade: C-

## Upper-Division Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
FORS 320	Forest Environmental Economics	3
FORS 330	Forest Ecology	3
FORS 335	Forest Ecology Lab	1
FORS 340	Forest Product Manufacturing	3
FORS 341	Timber Harvesting & Roads	3
FORS 349	Practice of Silviculture	3
FORS 440	Forest Stand Management	3
FORS 481	Forest Planning	3
NRSM 385	Watershed Hydrology	3
NRSM 422	Nat Res Policy/Administration	3
Total Hours		28

Minimum Required Grade: C-

## Professional Electives

**Rule:** Complete 15 total credits from the combined subcategories.

### Biophysical Sciences

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
BIOO 335	Rocky Mountain Flora	
BIOO 433	Plant Physiology	
FORS 333	Fire Ecology	
FORS 342	Wood Anatomy, Properties, & ID	
NRSM 418	Ecosystem Climatology	
WILD 370	Wildlife Habitat Cons & Mgmt	
Total Hours		3

Minimum Required Grade: C-

**Management Application**

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		5-6
FORS 331	Wildland Fuel Management	
FORS 434	Advanced Forest Roads	
FORS 435	Advanced Timber Harvesting	
NRSM 265	Elements of Ecological Restoration	
NRSM 360	Rangeland Mgt (equiv 260)	
Total Hours		5-6

Minimum Required Grade: C-

**Policy and Social Science**

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
ENST 225S	Sustainable Communities	
ENST 230H	Nature and Society	
NASX 303E	Ecological Perspectives in Native American Traditions	
NRSM 326	Climate and Society	
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics and Sustainability	
NRSM 424	Community Forestry & Conservtn	
NRSM 427	Advanced Water Policy	
NRSM 475	Environment & Development	
PTRM 217S	Parks & Outdoor Rec. Mgmt.	
PTRM 300	Recreation Behavior	
PTRM 310	Nat Res Interp and Comm	
PTRM 380	Rec Admin & Leadership	
PTRM 451	Tourism & Sustainability	
PTRM 482	Wilderness & Protected Area Management	
Total Hours		<b>3</b>

Minimum Required Grade: C-

**Measurement and Analysis**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
FORS 350	Forestry Apps of GIS	
FORS 351	Env Remote Sensing	
FORS 505	Sampling Methods	
GEO 421	Hydrology	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Writing Requirement

CODE	TITLE	HOURS
<b>Complete three of the following courses:</b>		9
BIOE 447	Ecosystem Ecology	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
Total Hours		9

Minimum Required Grade: C-

# Geography

## **Sarah Halvorson, Chair**

Whether global climate change or local land use change, geography provides an understanding of complex natural, social, and human-environmental processes at different geographic scales. Drawing on and expanding the knowledge base of Natural Sciences, Social Sciences, and Geographic Information Sciences, we focus on:

- Community and Environmental Planning
- Geographic Information Systems, and
- Mountain Systems.

Our graduates are successful in occupying meaningful and challenging positions in public, private, and non-profit sectors. Their contributions speak to the impacts geographers have in analyzing, understanding, and shaping our natural and human landscapes for the benefit of future generations.

The Department of Geography offers the Bachelor of Science and Master of Science degrees in Geography. For a B.S. in Geography concentrations in Community and Environmental Planning and Physical Geography are available. Also offered are minors in Geography and Mountain Studies. Several interdisciplinary minors that include coursework in Geography are available to students as well, including:

- Climate Change Studies,
- International Development Studies, and
- Global Public Health.

See the Graduate School website for more information concerning the M.A. and M.S. programs.

A Certificate in GIS Sciences and Technologies, jointly offered by the Department of Geography and the Department of Forest Management is also available. This GIS certificate is a complement to an existing major or to a bachelors degree already obtained. For details, please see below or the GIS website.

## **Baccalaureate Degrees**

- Geography B.S.
- Geography B.S., Physical Geography Concentration
- Geography B.S., Community & Environmental Planning Concentration

## **Undergraduate Minors**

- Geography Minor
- Mountain Studies Minor

## **Undergraduate Certificates**

## University Of Montana

- Geographic Information Systems Certificate

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## Geography B.S.

The general Geography B.S. degree (without concentration) is very flexible. In addition to meeting the core requirements for all geography majors, students may choose electives in geography (minimum 9 elective credits) from the subfields of regional geography, geographic methods and techniques, or systematic geography (physical geography, human-environment interaction, or geography and society).

### W.A. Franke College of Forestry and Conservation

**Degree Specific Credits:** 41-47

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary



## University Of Montana

Introduction to Geography	7
Regional Geography Course	3
Geographic Methods	6
Upper Division Geography	6
Degree Electives	9
Capstone	1
Upper Division Writing	3
Science Course	3-4
Biology	
Chemistry	
College Chemistry	
College Physics	
Physics with Calculus	
Mathematics Requirement	3-7
Math Fundamentals	
Advanced Math	
Total Hours	41-47

## Introduction to Geography

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		7
GPHY 111N	Intro to Physical Geography	
GPHY 112N	Intro to Phys Geography Lab	
GPHY 121S	Human Geography	
Total Hours		7

## University Of Montana

Minimum Required Grade: C-

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### Regional Geography Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 245	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	
Total Hours		3

Minimum Required Grade: C-

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### Geographic Methods

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		6
GPHY 284	Intro to GIS and Cartography	
GPHY 385	Field Techniques	
Total Hours		6

Minimum Required Grade: C-

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### Upper Division Geography

## University Of Montana

**Rule:** Complete two upper division Geography courses – one must be a Physical Geography Course (see below) or other course approved by Advisor. GPHY 385 and upper-division Regional courses are excluded. 6 total credits required.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
<b>Complete one additional 3-credit upper-division Geography Course (GPHY 385 and regional courses excluded)</b>		3
Total Hours		6

Minimum Required Grade: C-

## Degree Electives

CODE	TITLE	HOURS
<b>Complete 9 GPHY credits for a minimum of 32 GPHY credits for the degree.</b>		9
Total Hours		9

Minimum Required Grade: C-

## Capstone

**Note:** Seniors must enroll in GPHY 400 in fall, attend GPHY 500 in fall, and complete course requirements in spring.

CODE	TITLE	HOURS
<b>Seniors must complete the following course:</b>		
GPHY 400	Geography Capstone	1
Total Hours		1

Minimum Required Grade: C-

## Upper-Division Writing

**Note:**

- These courses will also count toward the upper-division requirement.
- Other science-based writing courses (e.g. GEO 320, GEO 499, BIOO 470, BIOO 475) may be approved by the advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 335	Water Policy	
GPHY 433	Community Resilience	
GPHY 499	Senior Thesis	
Total Hours		3

Minimum Required Grade: C-

## Science Course

**Rule:** Complete one of the following science courses. 3-4 total credits required. Science course must be approved by an advisor as appropriate to individual student's goals. Different science courses may be approved by the advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
BIOE 172N	Introductory Ecology	
BIOO 105N	Introduction to Botany	
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 141N	College Chemistry I	
CHMY 143N	College Chemistry II	
PHSX 205N	College Physics I	
PHSX 207N	College Physics II	
PHSX 215N	Fund of Physics w/Calc I	
PHSX 217N	Fund of Physics w/Calc II	
Total Hours		3-4

Minimum Required Grade: C-

## Mathematics Requirement

**Rule:** Must complete 1 of the following subcategories. 3-7 total credits required.

**Note:**

- Students may take M 115 and STAT 216, OR just one of M 162, M 171, or STAT 451.
- M 171 is recommended.

### Math Fundamentals

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		7
M 115	Probability and Linear Mathematics	
STAT 216	Introduction to Statistics	
Total Hours		7

University Of Montana

Minimum Required Grade: C-

**Advanced Math**

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
<b>Complete one of the following courses:</b>		3-4
M 162	Applied Calculus	
M 171	Calculus I (recommended)	
STAT 451	Statistical Methods I	
Total Hours		3-4

Minimum Required Grade: C-

University Of Montana

# **Geography B.S. - Community and Environmental Planning**

## **Bachelor of Science - Geography; Community & Environmental Planning Concentration**

**W.A. Franke College of Forestry and Conservation**

**Degree Specific Credits:** 37-46

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Introduction to Geography	7
Regional Geography Course	3
Methods	10
Geographic Methods	
Mathematics/Statistics	
Upper-Division Geography	6
Capstone	1
Upper-Division Writing	3
Science Requirement	3-4
Community and Environmental Planning Concentration	13-20
Community and Environmental Planning Core	
Community and Environmental Planning Methods	
Community and Environmental Planning Electives	
Total Hours	37-46

### Introduction to Geography

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GPHY 111N	Intro to Physical Geography	3
GPHY 112N	Intro to Phys Geography Lab	1
GPHY 121S	Human Geography	3
Total Hours		7

Minimum Required Grade: C-

### Regional Geography Course



CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 243	Africa	
GPHY 245	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	
Total Hours		3

Minimum Required Grade: C-

## Methods

**Rule:** Complete all of the following subcategories. 10 total credits required.

### Geographic Methods

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GPHY 284	Intro to GIS and Cartography	3
GPHY 385	Field Techniques	3
Total Hours		6

Minimum Required Grade: C-

### Mathematics/Statistics

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
STAT 216		4
Total Hours		4

Minimum Required Grade: C-

## Upper-Division Geography

**Rule:** Complete two upper division Geography courses – one must be a Physical Geography Course (see below) or other course approved by Advisor. GPHY 385 and upper-division Regional courses are excluded. 6 total credits required.

**Note:** Only GPHY 323S, GPHY 335, and GPHY 421, GPHY 432, and GPHY 433 count simultaneously toward Upper Division Geography and CEP electives.

CODE	TITLE	HOURS
<b>Complete one of the following physical geography courses:</b>		3
ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
<b>Complete one additional 3-credit upper-division Geography Course (GPHY 385 and regional courses excluded)</b>		3
Total Hours		6

Minimum Required Grade: C-

## Capstone

**Note:** Seniors must enroll in GPHY 400 in fall, attend GPHY 500 in fall, and complete course requirements in final semester.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GPHY 400	Geography Capstone	1
Total Hours		1

Minimum Required Grade: C-

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## Upper-Division Writing

**Note:** GPHY 335 or GPHY 433 will also count toward the upper-division core requirements and CEP Electives.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 335	Water Policy	
GPHY 433	Community Resilience	
GPHY 499	Senior Thesis	
Total Hours		3

Minimum Required Grade: C-

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## Science Requirement

**Rule:** Complete one of the following science courses. 3-4 total credits required. Science course must be approved by an advisor as appropriate to individual student's goals. Different science courses may be approved by the advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
BIOB 160N	Principles of Living Systems	
BIOE 172N	Introductory Ecology	
BIOO 105N	Introduction to Botany	
CHMY 121N	Introduction to General Chemistry	
CHMY 141N	College Chemistry I	
PHSX 205N	College Physics I	
PHSX 215N	Fund of Physics w/Calc I	
Total Hours		3-4

Minimum Required Grade: C-

## Community and Environmental Planning Concentration

**Rule:** Complete the following subcategories. 13 total credits required.

### Community and Environmental Planning Core

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 465	Planning Principles & Processes	
GPHY 466	Environmental Planning	
Total Hours		3

Minimum Required Grade: C-

### Community and Environmental Planning Methods

**Note:** GPHY 468 must be taken together with GPHY 469. GPHY 486 must be taken together with GPHY 489.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		4
GPHY 468 & GPHY 469	Community & Regional Analysis and Planning & Analysis Laboratory	
GPHY 486 & GPHY 489	Transport, Planning & GIS and Cartography/GIS Laboratory	
Total Hours		4

Minimum Required Grade: C-

### Community and Environmental Planning Electives

**Note:** If not previously taken to fulfill the CEP Core or Methods requirements, the following courses can be selected as electives:

- GPHY 465
- GPHY 466
- GPHY 468/GPHY 469 - 4 cr
- GPHY 486/GPHY 489 - 4 cr

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
GPHY 323S	Economic Geography of Rural Areas	
GPHY 335	Water Policy	
GPHY 421	Sustainable Cities	
GPHY 432	Human Role Environmental Change	
GPHY 433	Community Resilience	
Total Hours		6

Minimum Required Grade: C-

University Of Montana

## **Geography B.S. - Physical Geography**

### **Bachelor of Science - Geography; Physical Geography Concentration**

**W.A. Franke College of Forestry and Conservation**

**Degree Specific Credits:** 46-48

**Required Cumulative GPA:** 2.5

**Catalog Year:** 2021-22

**Note:** Depending on the courses selected the degree requirements vary from 43 to 48 credits.

### **General Education Requirements**

Information regarding these requirements can be found in the General Education Section of the catalog.

### **Summary**

## University Of Montana

Introduction to Geography	7
Regional Geography Course	3
Geographic Methods	6
Upper-Division Geography	6
Physical Geography	6
Capstone	1
Upper-Division Writing	3
Science Electives	6-8
Biology	
Chemistry	
College Chemistry	
College Physics	
Physics with Calculus	
Math Requirement	4
Advanced Math Requirement	4
Total Hours	46-48

## Introduction to Geography

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GPHY 111N	Intro to Physical Geography	3
GPHY 112N	Intro to Phys Geography Lab	1
GPHY 121S	Human Geography	3
Total Hours		7

Minimum Required Grade: C-

### Regional Geography Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 245	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	
Total Hours		3

Minimum Required Grade: C-

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### Geographic Methods

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GPHY 284	Intro to GIS and Cartography	3
GPHY 385	Field Techniques	3
Total Hours		6

Minimum Required Grade: C-

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### Upper-Division Geography

**Note:** GPHY 335 and GPHY 433 also satisfy the upper-division writing requirement.



University Of Montana

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
GPHY 323S	Economic Geography of Rural Areas	
GPHY 335	Water Policy	
GPHY 338	Mountains and Society	
GPHY 421	Sustainable Cities	
GPHY 432	Human Role Environmental Change	
GPHY 433	Community Resilience	
GPHY 434	Food and Famine	
GPHY 438	Mountain Field Study	
Total Hours		6

Minimum Required Grade: C-

### Physical Geography

CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
GPHY 438	Mountain Field Study	
GPHY 525	Advanced Physical Geography	
Total Hours		3

Minimum Required Grade: C-

### Capstone

## University Of Montana

**Note:** Seniors must enroll in GPHY 400 in fall, attend GPHY 500 in fall, and complete course requirements in spring.

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GPHY 400	Geography Capstone	1
Total Hours		1

Minimum Required Grade: C-

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## Upper-Division Writing

**Note:**

- GPHY 335 and GPHY 433 will also count toward the upper division requirement.
- GPHY 499 will also count toward upper division elective credits.
- Other science-based writing courses (e.g. GEO 320, GEO 499, BIOO 470, BIOO 475) may be approved by the advisor.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 335	Water Policy	
GPHY 433	Community Resilience	
GPHY 499	Senior Thesis	
Total Hours		3

Minimum Required Grade: C-

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## Science Electives

**Rule:** Must complete 1 of the following science categories. 6-8 total credits required.

### Biology

## University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
BIOE 172N	Introductory Ecology	3
BIOO 105N	Introduction to Botany	3
Total Hours		6

Minimum Required Grade: C-

### Chemistry

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
Total Hours		8

Minimum Required Grade: C-

### College Chemistry

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
CHMY 141N	College Chemistry I	4
CHMY 143N	College Chemistry II	4
Total Hours		8

Minimum Required Grade: C-

### College Physics

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
PHSX 205N	College Physics I	4
PHSX 207N	College Physics II	4
Total Hours		8

Minimum Required Grade: C-

### Physics with Calculus

CODE	TITLE	HOURS
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 217N	Fund of Physics w/Calc II	4
Total Hours		8

Minimum Required Grade: C-

## Math Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-4
M 162	Applied Calculus	
M 171	Calculus I	
M 172	Calculus II	
STAT 451	Statistical Methods I	
Total Hours		3-4

Minimum Required Grade: C-

## Advanced Math Requirement

**Note:** Example - if M 171 has been taken, M 172 is recommended.

CODE	TITLE	HOURS
<b>Complete 1 additional Math or Statistics course in addition to the one chosen for the Math Requirement.</b>		3-4
Total Hours		3-4

Minimum Required Grade: C-

# Geography Minor

## Minor - Geography

W.A. Franke College of Forestry and Conservation

**Degree Specific Credits:** 19

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Introduction to Geography	7
Regional Core	3
Geographic Methods	3
Upper-Division Systematic Geography	6
Teaching Geography Track	
Total Hours	19

### Introduction to Geography

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
GPHY 111N	Intro to Physical Geography	3
GPHY 112N	Intro to Phys Geography Lab	1
GPHY 121S	Human Geography	3
Total Hours		7

Minimum Required Grade: C-

### Regional Core

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 245	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	
Total Hours		3

Minimum Required Grade: C-

## Geographic Methods

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 284	Intro to GIS and Cartography	
GPHY 385	Field Techniques	
Total Hours		3

Minimum Required Grade: C-

## Upper-Division Systematic Geography

**Rule:** Complete at least 1 course from 2 of the following 3 subcategories. 6 total credits required.

### Physical Geography

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
GPHY 438	Mountain Field Study	
GPHY 525	Advanced Physical Geography	
Total Hours		3

Minimum Required Grade: C-

**Geography and Society**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 323S	Economic Geography of Rural Areas	
GPHY 421	Sustainable Cities	
GPHY 434	Food and Famine	
Total Hours		3

Minimum Required Grade: C-

**Human Environment Interaction**

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
GPHY 335	Water Policy	
GPHY 338	Mountains and Society	
GPHY 432	Human Role Environmental Change	
GPHY 433	Community Resilience	
Total Hours		3

Minimum Required Grade: C-

## Teaching Geography Track

### Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
  - Secondary Education Licensure Program
  - Licensure Degree Requirements
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

### Teaching Geography Required Course

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.



CODE	TITLE	HOURS
<b>Complete the following course:</b>		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Secondary Teaching Licensure

**Note:** For endorsement to teach geography, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure. For more information, see the Teaching and Learning Department.

# Geographic Information Systems Certificate

## Certificate in GIS Sciences and Technologies

The Certificate in GIS Sciences and Technologies, jointly offered by the departments of Geography and Forest Management, is aimed at present or future professionals or scientists who require skills in GIS technologies. The purpose of this program is to provide undergraduate students or individuals possessing an undergraduate degree with the training, knowledge, and understanding necessary to acquire, process, analyze, and properly display digital geographic data.

### Special Requirements for the Certificate

To earn a certificate in GIS Sciences and Technologies, students must either complete or have completed an undergraduate degree and complete a minimum of 18 semester credit hours of course work, including 9 to 10 required credits and 8 to 9 elective credits as described below. Students must achieve at least an overall grade point average of 3.0 for courses within the program in order to earn a certificate. The certificate will be awarded upon the successful completion of all of the requirements of the certificate and the undergraduate degree.

## Post-secondary Certificate - Geographic Information Systems

### W.A. Franke College of Forestry and Conservation

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 3.0

**Catalog Year:** 2021-22

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### Summary

<b>Required GIS Core Courses</b>	9-10
<b>Advanced Elective Courses</b>	8-9
Total Hours	18

### Required GIS Core Courses

**Rule:** Complete each of the following subcategories. 9-10 credits required.

CODE	TITLE	HOURS
<b>Introduction to GIS - Complete one of the following courses:</b>		3
FORS 250	Intro to GIS for Forest Mgt	
GPHY 284	Intro to GIS and Cartography	
<b>Photogrammetry/Remote Sensing - Complete one of the following courses:</b>		3-4
FORS 351	Env Remote Sensing	
GPHY 487 & GPHY 489	Remote Sensing/Raster GIS and Cartography/GIS Laboratory	
<b>Additional Required Course - Complete one of the following courses:</b>		3
FORS 350	Forestry Apps of GIS	
GPHY 488	Applications of GIS	
Total Hours		9-10

Minimum Required Grade: C-

## Elective Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete 8-9 credits of the following courses:</b>		8-9
ANTY 452	GIS in Archaeology	
CSCI 444	Data Visualization	
FORS 505	Sampling Methods	
FORS 551	Digital Image Processing	
GPHY 385	Field Techniques	
GPHY 468 & GPHY 469	Community & Regional Analysis and Planning & Analysis Laboratory	
GPHY 474	Remote Sensing for Freshwater Ecology	
GPHY 481	Advanced Cartographic Design	
GPHY 485	Internet GIS	
GPHY 486 & GPHY 489	Transport, Planning & GIS and Cartography/GIS Laboratory	
GPHY 564	Planning Design	
GPHY 580	Seminar GIS & Cartography	
GPHY 587 & GPHY 589	Image Analysis & Modeling and Cartography/GIS Laboratory	
GPHY 588 & GPHY 589	Spatial Analysis and Modeling and Cartography/GIS Laboratory	
WILD 562	Wildlife Habitat Modeling	

Minimum Required Grade: C-

## Mountain Studies Minor

Mountain Studies is an interdisciplinary field of study focusing on the physical and human dimensions of mountain environments. Coursework in the minor emphasizes biophysical-ecological and mountain-society interactions, including a critical analysis of the processes of change and influence shaping local and regional mountain environments today. The minor in Mountain Studies takes advantage of existing faculty expertise and an array of courses to provide students with a science-based curriculum and global perspective. Students pursuing the minor in mountain studies will develop knowledge and skills appropriate for graduate study and for working with government and non-government agencies and groups. A field-based experience, either domestically or in an international setting, is encouraged.

### Minor - Mountain Studies

#### W.A Franke College of Forestry & Conservation

**Degree Specific Credits: 18**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

**Note:** In addition to completing the requirements for a major in any discipline, students electing the minor in Mountain Studies must have a GPA of 3.0 in their major and complete a minimum of 18 additional credits in this minor. Each student must complete the core course, then complete 15 additional credits that support the student's academic interests in Mountain Studies. All elective courses must be approved by the program director. The Mountain Studies minor requires at least 6 credits in courses numbered 300 and above. Students can receive credit for special topics courses, relevant experiential learning and internship experiences, and for relevant courses taken at other universities.

### Summary

Upper-Division Core Course		3
Mountain Studies Elective Courses		15
Total Hours		18

#### Upper-Division Core Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
GPHY 338	Mountains and Society	3
Total Hours		3

Minimum Required Grade: C-

### Mountain Studies Elective Course

CODE	TITLE	HOURS
<b>Complete 15 credits from the following courses:</b>		15
BIOE 342	Field Ecology	
BIOE 416	Alpine Ecology	
BIOE 439	Stream Ecology	
BIOE 440	Conservation Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
BIOO 335	Rocky Mountain Flora	
ENST 401	TEK of Native Peoples	
ERTH 303N	Weather and Climate	
FORS 330	Forest Ecology	
FORS 333	Fire Ecology	
GEO 101N	Introduction to Physical Geology	
GEO 103N	Introduction to Environmental Geology	
GEO 107N	Natural Disasters	

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GEO 201	Geologic Evolution of North America	
GEO 202	The Water Planet	
GEO 318	Earth's Changing Climate	
GEO 421	Hydrology	
GEO 433	Global Tectonics	
GEO 460	Process Geomorphology	
GEO 488	Snow, Ice and Climate	
GPHY 141S	Geography of World Regions	
GPHY 241	Montana	
GPHY 317	Geomorphology	
GPHY 323S	Economic Geography of Rural Areas	
GPHY 474	Remote Sensing for Freshwater Ecology	
NASX 351	Traditional Ecological Knowledge	
NRSM 121S	Environmental Science and Sustainability	
NRSM 281	Science of Climate Change	
NRSM 311	Field Studies Ecology/Human Communities	
NRSM 385	Watershed Hydrology	
NRSM 346	Forests & Communities	
NRSM 374	Yellowstone Field Course	
NRSM 491	Special Topics	
PTRM 217S	Parks and Outdoor Recreation Management	
PTRM 353	Tourism, Livelihoods and Sustainability in Mountains	
PTRM 356	Wilderness Rescue and Survival	
PTRM 418	Winter Wilderness Field Studies	

University Of Montana

PTRM 482	Wilderness & Protected Area Management	
Total Hours		15

Minimum Required Grade: C-



# Parks, Tourism, and Recreation Management B.S.

**Libby Metcalf, Director**

The B.S. in Parks, Tourism & Recreation Management degree is designed to prepare students for professional positions developing and managing nature-based recreation experiences and park resources for public land management agencies, nonprofit organizations, and the nature-based tourism industry. Students pursuing this degree must choose between an concentration in Recreation Resources Management or Nature-Based Tourism. The Recreation Resources Management concentration provides the educational background necessary for evaluating and managing wild lands to protect their recreational, heritage, and ecological values. The Nature-Based Tourism concentration is designed to combine an understanding of social, cultural, political, environmental, and economic contexts surrounding tourism in a natural resource setting. All students learn the processes and conceptual skills needed to determine alternative management strategies, make management decisions, and carry out management programs. Included are courses leading to an understanding of the basic ecological characteristics of recreational lands. Students also take courses dealing with human behavior and management. Emphasis is placed on presenting problems that would be encountered while managing national parks and forests, state and regional parks, wilderness areas, and other recreation resources of international and national significance.

## Bachelor of Science - Parks, Tourism, and Recreation Management

**W.A Franke College of Forestry & Conservation**

**Degree Specific Credits:** 67-73

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

## University Of Montana

Lower-Division Major Required Courses	12
Lower-Division Outside Major Required Courses	24-25
Upper-Division Major Required Courses	25-30
Skills Courses	3
Upper-Division Writing Requirement	3
Total Hours	67-73

### Lower-Division Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 121S	Environmental Science and Sustainability	3
or PTRM 141Y	National Parks and American Culture	
NRSM 210N	Soils, Water and Climate	3
PTRM 210S	Nature Tourism & Comm Rec	3
PTRM 217S	Parks & Outdoor Rec. Mgmt.	3
Total Hours		12

Minimum Required Grade: C-

### Lower-Division Outside Major Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ACTG 201	Principles of Financial Accounting	3
ACTG 202	Principles of Managerial Accounting	3
COMX 111A	Introduction to Public Speaking	3
or THTR 120A	Introduction to Acting I	
ECNS 201S	Principles of Microeconomics	3
M 115	Probability and Linear Mathematics	3
PSYX 100S	Intro to Psychology	3
or SOCI 101S	Introduction to Sociology	
<b>Complete one of the following courses:</b>		3
BIOB 160N	Principles of Living Systems	
BIOB 170N	Princpls Biological Diversity	
BIOE 172N	Introductory Ecology	
BIOO 105N	Introduction to Botany	
<b>Complete one of the following courses:</b>		3-4
STAT 216	Introduction to Statistics	
SOCI 202	Social Statistics	
FORS 201	Forest Biometrics	
Total Hours		24-25

Minimum Required Grade: C-

## Upper-Division Major Required Courses

University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 447	Ecosystem Ecology	3
or FORS 330	Forest Ecology	
or NRSM 462	Rangeland Ecology	
NRSM 422	Nat Res Policy/Administration	3
PTRM 300	Recreation Behavior	3
PTRM 310	Nat Res Interp and Comm	3
PTRM 380	Rec Admin & Leadership	3
PTRM 482	Wilderness & Protected Area Management	3
or PTRM 451	Tourism & Sustainability	
PTRM 484	PTRM Field Measurement Tech	3
PTRM 485	Recreation Planning	3
or PTRM 486	Entrepreneurship in Tourism and Recreation	
PTRM 495	Practicum in PTRM	1-6
Total Hours		25-30

**Skills Courses**

CODE	TITLE	HOURS
<b>Complete 3 credits from the following courses:</b>		3
ECP 120 & ECP 121	Emergency Medical Responder Lecture and Emergency Medical Responder Lab	
NRSM 379	Collab in Nat Res Decisions	
BMKT 325	Principles of Marketing	
FORS 250	Intro to GIS for Forest Mgt	
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Writing Requirement

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
PTRM 451	Tourism & Sustainability	
PTRM 482	Wilderness & Protected Area Management	
Total Hours		3

Minimum Required Grade: C-

### Tracks

These are advising tracks only and not official programs as recognized by the University of Montana (UM) or the Montana University System. This information will not appear on your UM transcript, diploma, university lists, student data system, or university publication. You do not fill out a major change for a track.

#### Nature Based Tourism Recommended Electives

**Rule:** Can take these track courses

**Note:** Courses are not required in this track - please talk to a faculty advisor on what classes will be best for your area of interest.

## University Of Montana

CODE	TITLE	HOURS
ANTY 101H	Anthro & the Human Experience	3
BMKT 325	Principles of Marketing	3
BMKT 337	Consumer Behavior	3
COMX 220S	Introduction to Organizational Communication	3
COMX 351	Principles of Public Relations	3
ECNS 202S	Principles of Macroeconomics	3
FORS 202	Forest Mensuration	3
FORS 320	Forest Environmental Economics	3
FORS 351	Env Remote Sensing	3
GEO 101N	Introduction to Physical Geology	3
GPHY 111N	Intro to Physical Geography	3
GPHY 311N	Biogeography	3
GPHY 433	Community Resilience	3
NRSM 379	Collab in Nat Res Decisions	3
NRSM 389E	Ethics Forestry & Conservation	3
NRSM 475	Environment & Development	3
PHL 112E	Intro Ethics and Environment	3
PTRM 150	Current Issues in PTRM	1

Minimum Required Grade: C-

### Outdoor Recreation Services

**Rule:** Can take these track courses

**Note:** Courses are not required in this track - please talk to a faculty advisor on what classes will be best for your area of interest.

University Of Montana

CODE	TITLE	HOURS
BMGT 401	Event Management	3
COMX 115S	Introduction to Interpersonal Communications	3
COMX 220S	Introduction to Organizational Communication	3
COMX 421	Communication in Nonprofit Organizations	3
ENST 225S	Sustainable Communities	3
ENST 230H	Nature and Society	3
GPHY 121S	Human Geography	3
NASX 180	Event Planning	3
NPAD 460	Nonprofit Marketing and Social Media	2
NPAD 467	Advanced Nonprofit Admin	3
NRSM 379	Collab in Nat Res Decisions	3
PTRM 150	Current Issues in PTRM	1
S W 300	Hum Behav & Soc Environ	3
SOCI 346	Rural Sociology	3
SOCI 350	The Community	3

Minimum Required Grade: C-

**Recreation Resource Management Track**

**Rule:** Can take these track courses

**Note:** Courses are not required in this track - please talk to a faculty advisor on what classes will be best for your area of interest.

University Of Montana

<b>CODE</b>	<b>TITLE</b>	<b>HOURS</b>
CHMY 121N	Introduction to General Chemistry	4
COMX 421	Communication in Nonprofit Organizations	3
FORS 230	Fire Management & Environmental Change	3
FORS 240	Tree Biology	2
FORS 241N	Dendrology	3
FORS 250	Intro to GIS for Forest Mgt	3
FORS 331	Wildland Fuel Management	3
FORS 333	Fire Ecology	3
FORS 347	Multiple Resource Silviculture	3
GPHY 121S	Human Geography	3
GPHY 433	Community Resilience	3
NRSM 265	Elements of Ecological Restoration	3
NRSM 379	Collab in Nat Res Decisions	3
NRSM 389E	Ethics Forestry & Conservation	3
NRSM 475	Environment & Development	3
PTRM 150	Current Issues in PTRM	1

Minimum Required Grade: C-



# Wildlife Biology

## Chad Bishop, Director

The Wildlife Biology Program combines the best features of a liberal arts curriculum with scientific preparation in wildlife conservation. The Program provides students with an extensive knowledge in ecology, population biology, conservation biology, and critical thinking and quantitative skills. Our students receive a strong academic and scientific background with an emphasis on hands-on, experiential learning. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

While some employment opportunities exist in wildlife conservation for students with the baccalaureate degree, we encourage students to continue their education through the master's degree to qualify for most state, federal, and private positions.

Two concentrations are offered in the Wildlife Biology Program: terrestrial and aquatic. They both follow the same schedule of courses for the freshman and most of the sophomore year and then pursue different curricula for the last two years. Each leads to a B.S. in Wildlife Biology. The University is well-suited for instruction in wildlife biology because of the excellent opportunities for field instruction and research at Lubrecht Experimental Forest, Flathead Lake Biological Station, and the Theodore Roosevelt Memorial and Bandy ranches. The Montana Forest and Conservation Experiment Station, the Division of Biological Sciences, and the Montana Cooperative Wildlife Research Unit facilitate research.

**High School Preparation:** In addition to general University admission requirements, the student should elect four years of mathematics and three years of science, including biology, chemistry and physics.

## Wildlife Biology Honors Track

The honors curriculum is designed particularly for students with strong academic records who intend to do graduate work. Entrance into this emphasis is open only to students who, at the beginning of the junior year of the wildlife biology program, have a grade-point average of 3.5 or above and who petition the faculty for entrance.

Honors students must complete either WILD 370, WILD 470 and WILD 494 (terrestrial option) or BIOO 340, BIOE 428 and WILD 494 (aquatic option). Honors students are encouraged to enroll also in WILD 499. The balance of the coursework for the junior and senior years will be developed in consultation with the honors student's faculty advisor and committee.

All students in the honors emphasis are required to meet with their faculty advisor prior to autumn semester registration of their junior and senior years to work out their course schedules.

## Undergraduate

- Wildlife Biology B.S., Aquatic Wildlife Biology Concentration
- Wildlife Biology B.S., Terrestrial Wildlife Biology Concentration

## Undergraduate Minors

University Of Montana

- Wildlife Biology

## Wildlife Biology - Aquatic

*Chad Bishop, Wildlife Biology Director*

The Wildlife Biology Program combines the best features of a liberal arts curriculum with scientific preparation in wildlife conservation. The Program provides students with an extensive knowledge in ecology, population biology, conservation biology, and critical thinking and quantitative skills. Our students receive a strong academic and scientific background with an emphasis on hands-on, experiential learning. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

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The honors curriculum is designed particularly for students with strong academic records who intend to do graduate work. Entrance into this emphasis is open only to students who, at the beginning of the junior year of the wildlife biology program, have a grade-point average of 3.5 or above and who petition the faculty for entrance.

Honors students must complete either WILD 370, WILD 470 and WILD 494 (terrestrial option) or BIOO 340, BIOE 428 and WILD 494 (aquatic option). Honors students are encouraged to enroll also in WILD 499. The balance of the coursework for the junior and senior years will be developed in consultation with the honors student's faculty advisor.

All students in the honors emphasis are required to meet with their faculty advisor prior to autumn semester registration of their junior and senior years to work out their course schedules.

## Bachelor of Science - Wildlife Biology; Aquatic Concentration

### W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 87-89

**Required Cumulative GPA:** 2.5

## Catalog Year: 2021-22

**Note:** Experiential Learning is required - Students have several options to fulfill this requirement - list is available from the Wildlife Advisor in Forestry 103C

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Major Required Courses	29
Major Required Courses - Aquatic Concentration	23-24
Outside Major Required Courses	20-21
Advanced College Writing Requirement	15
Total Hours	87-89

### Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
WILD 180	Careers in Wildlife Biology	2
WILD 346	Wildlife Physiological Ecology	3
WILD 410	Wildlife Policy & Biopolitics	3
or NRSM 422	Nat Res Policy/Administration	
WILD 480	The Upshot--Appld Wildlife Mgt	3
WILD 494	Senior Wildlife Seminar	1
Total Hours		29

Minimum Required Grade: C-

### Major Required Courses - Aquatic Concentration

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOE 428	Freshwater Ecology	5
BIOO 320	General Botany	5
BIOO 340	Biology and Mgmnt of Fishes	4
NRSM 385	Watershed Hydrology	3
WILD 408	Advanced Fisheries	3
<b>Complete one of the following courses:</b>		3-4
BIOE 406	Behavior & Evolution	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOO 462	Entomology	
WILD 485	Aquatic Invertebrate Ecology	
Total Hours		23-24

Minimum Required Grade: C-

## Outside Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
COMX 111A	Introduction to Public Speaking	3
M 162	Applied Calculus	4
or M 171	Calculus I	
STAT 216	Introduction to Statistics	3-4
or WILD 240	Intro to Biostatistics	
Total Hours		20-21

Minimum Required Grade: C-

### Advanced College Writing Requirement

CODE	TITLE	HOURS
<b>Complete any three of the courses from the following lists:</b>		
<b>The following courses are required in the Aquatic Concentration:</b>		15
BIOE 371	Gen Ecology Lab (equiv to 271)	
BIOE 428	Freshwater Ecology	
BIOO 320	General Botany	
WILD 408	Advanced Fisheries	
<b>The following courses are additional options that can also be used to fulfill the Advanced College Writing requirement:</b>		
BIOB 483	Phylogenics and Evolution	
BIOE 342	Field Ecology	

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BIOE 403	Comparative Vert Anatomy	
BIOE 409	Behavior & Evolution Discussion	
BIOE 447	Ecosystem Ecology	
BIOL 484	Plant Evolution	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
NRSM 326	Climate and Society	
NRSM 344	Ecosystem Science and Restoration Capstone	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 462	Rangeland Ecology	
NRSM 475	Environment & Development	
PTRM 300	Recreation Behavior	
PTRM 451	Tourism & Sustainability	
PTRM 482	Wilderness & Protected Area Management	
WILD 410	Wildlife Policy & Biopolitics	
WILD 470	Conserv of Wildlife Populatns	
WILD 499	Thesis	
Total Hours		15

Minimum Required Grade: C-



## Wildlife Biology - Terrestrial

*Chad Bishop, Wildlife Biology, Director*

The Wildlife Biology Program combines the best features of a liberal arts curriculum with scientific preparation in wildlife conservation. The Program provides students with an extensive knowledge in ecology, population biology, conservation biology, and critical thinking and quantitative skills. Our students receive a strong academic and scientific background with an emphasis on hands-on, experiential learning. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

While some employment opportunities exist in wildlife conservation for students with the baccalaureate degree, we encourage students to continue their education through the master's degree to qualify for most state, federal, and private positions.

Two concentrations are offered in the Wildlife Biology Program: terrestrial and aquatic. They both follow the same schedule of courses for the freshman and most of the sophomore year and then pursue different curricula for the last two years. Each leads to a B.S. in Wildlife Biology. The University is well-suited for instruction in wildlife biology because of the excellent opportunities for field instruction and research at Lubrecht Experimental Forest, Flathead Lake Biological Station, and the Theodore Roosevelt Memorial and Bandy ranches. The Montana Forest and Conservation Experiment Station, the Division of Biological Sciences, and the Montana Cooperative Wildlife Research Unit facilitate research.

**High School Preparation:** In addition to general University admission requirements, the student should elect four years of mathematics and three years of science, including biology, chemistry and physics.

## Wildlife Biology Honors - Track

The honors curriculum is designed particularly for students with strong academic records who intend to do graduate work. Entrance into this emphasis is open only to students who, at the beginning of the junior year of the wildlife biology program, have a grade-point average of 3.5 or above and who petition the faculty for entrance.

Honors students must complete either WILD 370, WILD 470 and WILD 494 (terrestrial option) or BIOO 340, BIOE 428 and WILD 494 (aquatic option). Honors students are encouraged to enroll also in WILD 499. The balance of the coursework for the junior and senior years will be developed in consultation with the honors student's faculty.

All students in the honors emphasis are required to meet with their faculty advisor prior to autumn semester registration of their junior and senior years to work out their course schedules.

## Bachelor of Science - Wildlife Biology; Terrestrial Concentration

### W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 84-85

**Required Cumulative GPA:** 2.5

## Catalog Year: 2021-22

**Note:** Experiential Learning is required - Students have several options to fulfill this requirement - list is available from the Wildlife Advisor in Forestry 103C.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section of the catalog.

### Summary

Major Required Courses	29
Major Required Courses - Terrestrial Concentration	22
Outside Major Required Courses	20-21
Advanced College Writing Requirement	13
Total Hours	84-85

### Major Required Courses

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
WILD 180	Careers in Wildlife Biology	2
WILD 346	Wildlife Physiological Ecology	3
WILD 410	Wildlife Policy & Biopolitics	3
or NRSM 422	Nat Res Policy/Administration	
WILD 480	The Upshot--Appld Wildlife Mgt	3
WILD 494	Senior Wildlife Seminar	1
Total Hours		29

Minimum Required Grade: C-

### Major Required Courses - Terrestrial Concentration

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CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOO 335	Rocky Mountain Flora	3
NRSM 360	Rangeland Mgt (equiv 260)	3
or FORS 347	Multiple Resource Silviculture	
WILD 370	Wildlife Habitat Cons & Mgmt	4
WILD 470	Conserv of Wildlife Populatns	4
<b>Complete two of the following courses:</b>		8
BIOO 340	Biology and Mgmnt of Fishes	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
Total Hours		22

Minimum Required Grade: C-

**Outside Major Required Courses**

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
CHMY 121N	Introduction to General Chemistry	4
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 124	Introduction to Organic and Biochemistry Lab	2
COMX 111A	Introduction to Public Speaking	3
M 162	Applied Calculus	4
or M 171	Calculus I	
STAT 216	Introduction to Statistics	3-4
or WILD 240	Intro to Biostatistics	
Total Hours		20-21

Minimum Required Grade: C-

### Advanced College Writing Requirement

CODE	TITLE	HOURS
<b>Complete any three of the courses from the following lists:</b>		
<b>The following courses are required in the Terrestrial Concentration:</b>		13
BIOE 371	Gen Ecology Lab (equiv to 271)	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
WILD 470	Conserv of Wildlife Populatns	
<b>The following courses are additional options that can also be used to fulfill the Advanced College Writing requirement:</b>		
BIOB 483	Phylogenics and Evolution	
BIOE 342	Field Ecology	

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BIOE 403	Comparative Vert Anatomy	
BIOE 409	Behavior & Evolution Discussion	
BIOE 428	Freshwater Ecology	
BIOE 447	Ecosystem Ecology	
BIOL 484	Plant Evolution	
BIOO 320	General Botany	
BIOO 434	Plant Physiology Lab	
FORS 330	Forest Ecology	
FORS 341	Timber Harvesting & Roads	
FORS 349	Practice of Silviculture	
FORS 440	Forest Stand Management	
NRSM 326	Climate and Society	
NRSM 344	Ecosystem Science and Restoration Capstone	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics Forestry & Conservation	
NRSM 462	Rangeland Ecology	
NRSM 475	Environment & Development	
NRSM 495	Ecosystem Science and Restoration Practicum	
PTRM 300	Recreation Behavior	
PTRM 451	Tourism & Sustainability	
PTRM 482	Wilderness & Protected Area Management	
WILD 408	Advanced Fisheries	
WILD 410	Wildlife Policy & Biopolitics	

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WILD 499	Thesis	
Total Hours		13

Minimum Required Grade: C-

## Wildlife Biology Minor

*Chad Bishop, Director*

The Wildlife Biology Program combines the best features of a liberal arts curriculum with scientific preparation in wildlife conservation. The Program provides students with an extensive knowledge in ecology, population biology, conservation biology, and critical thinking and quantitative skills. Our students receive a strong academic and scientific background with an emphasis on hands-on, experiential learning. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

While some employment opportunities exist in wildlife conservation for students with the baccalaureate degree, we encourage students to continue their education through the master's degree to qualify for most state, federal, and private positions.

Two concentrations are offered in the Wildlife Biology Program: terrestrial and aquatic. They both follow the same schedule of courses for the freshman and most of the sophomore year and then pursue different curricula for the last two years. Each leads to a B.S. in Wildlife Biology. The University is well-suited for instruction in wildlife biology because of the excellent opportunities for field instruction and research at Lubrecht Experimental Forest, Flathead Lake Biological Station, and the Theodore Roosevelt Memorial and Bandy ranches. The Montana Forest and Conservation Experiment Station, the Division of Biological Sciences, and the Montana Cooperative Wildlife Research Unit facilitate research.

### Minor - Wildlife Biology

#### W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 19-23

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

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### Summary

Required Courses	19-23
Total Hours	19-23

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### Required Courses



University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 170N	Princpls Biological Diversity	3
BIOB 171N	Princpls Biological Dvrsty Lab	2
BIOB 272	Genetics and Evolution	4
<b>Complete one of the following courses:</b>		2-3
BIOO 101N	Survey MT Wildlife & Habitats	
WILD 105N	Wildlife & People	
WILD 180	Careers in Wildlife Biology	
<b>Complete one 200-level or greater WILD course</b>		2-4
<b>Complete one upper-division course chosen from BIOE, BIOO, NRSM, PTRM or WILD</b>		3-4
Total Hours		19-23

Minimum Required Grade: C-

# Ecological Restoration Minor

## Minor - Ecological Restoration

W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 24-29

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Course List		
CODE	TITLE	HOURS
Lower-Division Required Courses		9-10
Upper-Division Required Courses		9-11
Natural Science Electives		3-5
Social Science Electives		3
Total Hours		24-29

### Lower-Division Required Courses

		Course List
CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 210N	Soils, Water and Climate	3
NRSM 265	Elements of Ecological Restoration	3
<b>Complete one of the following courses:</b>		3-4
FORS 201	Forest Biometrics	
STAT 216	Introduction to Statistics	
WILD 240	Intro to Biostatistics	
Total Hours		9-10

Minimum Required Grade: C-

### Upper-Division Required Courses

		Course List
CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 385	Watershed Hydrology	3
or BIOO 335	Rocky Mountain Flora	
NRSM 465	Foundations of Restoration Ecology	3
<b>Complete one of the following courses:</b>		3-5
FORS 330	Forest Ecology	
BIOE 370	General Ecology	
BIOE 428	Freshwater Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		9-11

Minimum Required Grade: C-

## Natural Science Electives

**Rule:** Complete one of the following courses, but not a course already used for a core or above requirement.

		Course List
CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3-5
BIOE 342	Field Ecology	
BIOE 370	General Ecology	
BIOE 416	Alpine Ecology	
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 448	Terrestrial Plant Ecology	
BIOE 451	Landscape Ecology	
BIOE 453	Lake Ecology	
BIOE 458	Forest and Fire Ecology	
BIOO 335	Rocky Mountain Flora	
BIOO 340	Biology and Mgmt of Fishes	
BIOO 433	Plant Physiology	
FORS 202	Forest Mensuration	
FORS 330	Forest Ecology	
FORS 331	Wildland Fuel Management	
FORS 333	Fire Ecology	
FORS 347	Multiple Resource Silviculture	
GEO 420	Hydrogeology	

GEO 460	Process Geomorphology	
NRSM 385	Watershed Hydrology	
NRSM 408	Global Cycles and Climate	
NRSM 415	Environmental Soil Science	
NRSM 418	Ecosystem Climatology	
NRSM 455	Riparian Ecology & Management	
NRSM 462	Rangeland Ecology	
WILD 470	Conserv of Wildlife Populatns	
WILD 485	Aquatic Invertebrate Ecology	
Total Hours		3-5

Minimum Required Grade: C-

## Social Science Electives

**Rule:** Complete one course from the following, but if one of these courses are required for the major a second elective must be taken.

		Course List
CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		<b>3</b>
ECNS 433	Economics of the Environment	
FORS 320	Forest Environmental Economics	
GPHY 335	Water Policy	
NRSM 326	Climate and Society	
NRSM 349E	Climate Change Ethics/Policy	
NRSM 379	Collab in Nat Res Decisions	
NRSM 422	Nat Res Policy/Administration	
NRSM 475	Environment & Development	
NRSM 389E	Ethics and Sustainability	
PTRM 482	Wilderness & Protected Area Management	
Total Hours		<b>3</b>

Minimum Required Grade: C-

# Fire Sciences and Management Minor

## Minor - Fire Sciences & Management

W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 24

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Lower-Division Required Courses	3
Upper-Division Required Courses	3
Ecology Courses	3
Practicum or Planning Course	3
Meteorology or Climate Course	3
Measurements & Analysis Electives	3
Natural/Management Science Electives	3
Social Science Electives	3
Total Hours	24

### Lower-Division Required Course

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
FORS 230	Fire Management & Environmental Change	3
Total Hours		3

Minimum Required Grade: C-

### Upper-Division Required Courses

CODE	TITLE	HOURS
<b>Complete the following course:</b>		
FORS 333	Fire Ecology	3
Total Hours		3

Minimum Required Grade: C-

### Ecology Courses

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 370	General Ecology	
FORS 330	Forest Ecology	
NRSM 462	Rangeland Ecology	
Total Hours		3

Minimum Required Grade: C-

### Practicum or Planning Course

**Note:** FORS 498 must be approved by fire minor advisor prior to registration and taken for 3 credits



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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
FORS 440	Forest Stand Management	
FORS 495	Wildland RxFire Practicum	
FORS 498	Internship (must be approved by fire minor advisor)	
NRSM 495	Ecosystem Science and Restoration Practicum	
PTRM 485	Recreation Planning	
WILD 480	The Upshot--Appld Wildlife Mgt	
Total Hours		3

Minimum Required Grade: C-

### Meteorology or Climate Course

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
ERTH 303N	Weather and Climate	
NRSM 418	Ecosystem Climatology	
Total Hours		0

Minimum Required Grade: C-

### Measurements & Analysis Electives

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
FORS 202	Forest Mensuration	
FORS 350	Forestry Apps of GIS	
FORS 351	Env Remote Sensing	
Total Hours		3

Minimum Required Grade: C-

### Natural/Management Science Electives

**Rule:** Complete one course from the following, but if one of these courses is required for the major a second elective must be taken

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
FORS 331	Wildland Fuel Management	
FORS 347	Multiple Resource Silviculture	
FORS 349	Practice of Silviculture	
GPHY 317	Geomorphology	
NRSM 385	Watershed Hydrology	
NRSM 465	Foundations of Restoration Ecology	
WILD 370	Wildlife Habitat Cons & Mgmt	
Total Hours		3

Minimum Required Grade: C-

### Social Science Electives

**Rule:** Complete one course from the following, but if one of these courses is required for the major a second elective must be taken

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CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
FORS 320	Forest Environmental Economics	
NASX 303E	Ecological Perspectives in Native American Traditions	
NRSM 379	Collab in Nat Res Decisions	
NRSM 389E	Ethics and Sustainability	
NRSM 422	Nat Res Policy/Administration	
PTRM 482	Wilderness & Protected Area Management	
Total Hours		3

Minimum Required Grade: C-

## Wilderness Studies Minor

**Joanna Campbell, Director of Education Programs, Wilderness Institute**

The Wilderness Studies minor is an interdisciplinary undergraduate program that combines campus- and field-based experiences. Students investigate sustainability, wildland conservation, and the human-environment relationship through the lenses of ecology, humanities, arts, and social sciences. Students earn the Wilderness Studies minor by completing the Wilderness and Civilization program, an 18 credit fall semester immersion program. Wilderness and Civilization is open to all majors. Students must apply for the program, which is limited to 25 students each year. Applicants must have sophomore standing or higher and a cumulative GPA  $\geq 3.0$  for all college work. Applications are due by April 1 and are available online at <http://www.cfc.umt.edu/wi/>.

### Minor - Wilderness Studies

**W.A Franke College of Forestry & Conservation**

**Degree Specific Credits: 18**

**Required Cumulative GPA: 2.0**

**Catalog Year: 2021-22**

### Summary

Lower-Division Required courses	7
Upper-Division Required Courses	5
Arts, Humanities, and Social Sciences	6
Total Hours	18

### Lower-Division Required Courses

**Note:** NRSM 271N is an Honors course.

## University Of Montana

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
ECP 102	Wilderness First Aid	1
NRSM 271N	Conservation Ecology	3
NRSM 273	Wilderness & Civilization Field Studies	3
Total Hours		7

Minimum Required Grade: C-

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### Upper-Division Required Courses

**Note:** NRSM 373 is an Honors course.

CODE	TITLE	HOURS
<b>Complete all of the following courses:</b>		
NRSM 373	Wilderness and Civilization	5
Total Hours		5

Minimum Required Grade: C-

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### Arts, Humanities, and Social Sciences

**Note:** LIT 280L is an Honors course.

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CODE	TITLE	HOURS
<b>Complete two of the following courses:</b>		6
ARTZ 321	Painting II Contemporary Landscape	
ARTZ 394A	Environmental Drawing	
ENST 410	TEK of Indigenous Peoples	
LIT 280L	Ecology of Literature	
NASX 303E	Ecological Perspectives in Native American Traditions	
NRSM 370S	Wildland Conservation Policy/Governance	
NRSM 398	Internship	
Total Hours		6

Minimum Required Grade: C-

## Northern Rockies Outdoor Leadership Certificate

The Northern Rockies Outdoor Leadership Certificate is designed through collaboration of multiple University of Montana programs as a certificate to complement any major across campus for students interested in gaining and strengthening leadership skills through engagement in diverse conceptual courses and outdoor field settings. The purpose of the program is to provide undergraduate students or individuals with an undergraduate degree with leadership training and application that can be applied to any professional, academic, and personal setting in their future.

### Post-Secondary Certificate - Northern Rockies Outdoor Leadership Certificate

W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.00

**Catalog Year:** 2021-22

#### Summary

Theory and Experience	
Field Courses	
Internship	
Total Hours	15

#### Theory and Experience

**Rule:** Complete one course each in the Theory and Experience categories.

##### Theory

## University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
COMX 210	Communication in Small Groups	
GBLD 220	Models of Leadership	
HTH 465	Leading Health and, Human Perform Orgs	
NRSM 373	Wilderness and Civilization	
PSCI 462	Human Resource Management	
PTRM 217S	Parks & Outdoor Rec. Mgmt.	
PTRM 380	Rec Admin & Leadership	

Minimum Required Grade: C-

### Experience

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
ACT 114	Beginning Rock Climbing	
ACT 175	Fly Fishing	
ACT 176	Fundamentals of Whitewater Rafting	
ACT 177	Fundamentals of Kayaking	
ACT 214	Intermediate Rock Climbing	
ECP 102	Wilderness First Aid	
ECP 122	Wilderness First Responder	
ECP 331	Wilderness EMT	

Minimum Required Grade: C-

### Field Courses



CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
NRSM 273	Wilderness/Civ Field Stds	
PTRM 345X	Sustaining Human Soc & Nat Env	
PTRM 353	Tourism, Livelihoods and Sustainability in Mountains	
PTRM 355	Wild. Med. And Risk Mgmt.	
PTRM 356	Wild. Rescue and Survival	
PTRM 418	Winter Wilderness Field Studies	

Minimum Required Grade: C-

## Internship

**Note:** Students are required to do an internship where they can apply their leadership skills with a professional partner. Internships can include on-campus initiatives like the Freshman Wilderness Experience and other student-led trips as well as off-campus internships with local, regional, or global partners. Internships will be approved by the coordinating committee and will be tracked through the W.A. Franke College of Forestry and Conservation.

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		
CHTH 498	Internship	
KIN 498	Internship	
NRSM 498	Internship	
PTRM 398	Internship	

Minimum Required Grade: C-

## Water Science and Society Certificate

The Water Science and Society Certificate provides students from a range of majors with foundational knowledge in water science and policy. Students take courses in the biological, physical, and policy sciences, and courses focused on skills relevant to understanding and managing water. The certificate culminates in a capstone experience that enables students to apply conceptual water knowledge to a project.

### W.A Franke College of Forestry & Conservation

**Degree Specific Credits:** 15

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2021-22

### Summary

Social/Policy	3
Physical	3
Biological/Ecological	3
Skills	3
Capstone	3
Total Hours	15

### Social/Policy

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
NRSM 427	Water Policy	
GPHY 335	Water and Sustainability	
Total Hours		3

Minimum Required Grade: C-

### Physical

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
ERTH 303N	Weather and Climate	
GEO 202	The Water Planet	
GEO 320	Global Water	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
NRSM 385	Watershed Hydrology	
Total Hours		3

Minimum Required Grade: C-

### Biological/Ecological

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
BIOE 428	Freshwater Ecology	
BIOE 439	Stream Ecology	
BIOE 453	Lake Ecology	
BIOO 340	Biology and Mgmnt of Fishes	
WILD 485	Aquatic Invertebrate Ecology	
Total Hours		3

Minimum Required Grade: C-

### Skills

CODE	TITLE	HOURS
<b>Complete one of the following courses:</b>		3
CSCI 444	Data Visualization	
ECNS 201S	Principles of Microeconomics	
ECNS 433	Economics of the Environment	
ECNS 445	Int Env Econ & Clim Change	
GPHY 284	Intro to GIS and Cartography	
GPHY 385	Field Techniques	
GPHY 465	Planning Principles & Processes	
GPHY 466	Environmental Planning	
GPHY 468	Community & Regional Analysis	
GPHY 482	Spatial Analysis & GIS	
GPHY 487	Remote Sensing/Raster GIS	
NRSM 379	Collab in Nat Res Decisions	
PSCI 361	Public Administration	
PSCI 491	Special Topics (Agency Policy-Making)	
PTRM 310	Nat Res Interp and Comm	
Total Hours		3

Minimum Required Grade: C-

## Capstone

**Note:** The course that satisfies this requirement must include a substantive project that is focused on water. To meet this requirement, students can complete a thesis, an internship, or a field course. Alternatively, they can complete one of the art courses listed below. In all cases, the project needs to be focused on water.

University Of Montana

CODE	TITLE	HOURS
<b>Complete one of the following:</b>		3
ARTZ 321	Painting II	
ARTZ 394A	Seminar- Environmental Drawing	
A thesis or internship course in the student's home department.		
A field course with a project or research component.		
Total Hours		3

Minimum Required Grade: C-

## Helena College University of Montana < University of Montana

### Helena College University of Montana

Helena College offers two-year programs in business, trades, technical, and health occupations designed to meet the state's business and industry needs for technologically-skilled workers. All of the curricula are industry-approved and emphasize learning in a hands-on environment. In addition, the college offers an Associate of Science degree and Associate of Arts degree designed to transfer to four-year institutions. The college, founded in 1939, is fully accredited by the Northwest Commission on Colleges and Universities (NWCCU), approved by the Montana State Board of Nursing, certified and licensed by the Federal Aviation Administration, and certified by the National Institute for Automotive Service Excellence.

Helena College students take a full complement of courses in mathematics, communications, computer literacy, and career development. Located in Helena, Montana's beautiful capitol city, the College offers its programs in modern classrooms, shops, and labs, both near the Capitol building and at the Helena airport. For more information, call (406) 447-6900.

## Montana Tech of The University of Montana < University of Montana

### Montana Tech of The University of Montana

Opening its doors in 1900 as the Montana School of Mines, Montana Tech has a century-old reputation as one of the finest science and engineering universities in the nation. Early curricula at the Montana State School of Mines were designed around mining and electrical engineering.

Today, Montana Tech specializes in the areas of science, technology, engineering, math, and healthcare disciplines and has repeatedly been recognized among the top 10% of all universities in America. Enrollment on campus sits at 2,945 students on its two campuses. The university offers 13 certificate programs, 14 associate degrees, 25 undergraduate programs, 10 masters programs, and a doctoral program in Materials Science. The north campus offers four-year and graduate degrees while the south campus, Highlands College, offers associate degrees and certificate programs, continuing education, and customized training.

Montana Tech is a friendly campus where students get involved in a wide array of campus events and activities as well as abundant outdoor recreational opportunities. Student satisfaction surveys consistently give the university high marks for its quality of student life. The student body presents a national and global snapshot with 43 states and 24 foreign countries represented.

Montana Tech emphasizes teamwork, collaboration, and hands-on learning and has a long-standing reputation for producing outstanding graduates. For the past 10 years, Montana Tech graduates have enjoyed a 92% placement rate, including acceptance into professional and graduate programs, and graduates from our School of Mines report an average starting salary of \$66,186. Many of the university's alumni have attained senior leadership positions in the minerals, energy, and natural resource industries as well as business. Over 16% of Montana Tech alumni give back to the campus each year.

Located in the heart of the mountains of Southwest Montana, the 98-acre main campus can be seen for miles. With over \$20 million in recently completed building and renovation projects and another \$12.5 million currently under construction, the campus blends its historical buildings with new state-of-the-art laboratory and instructional facilities. Highlands College is located seven miles south of the main campus.

The Montana Bureau of Mines and Geology, Montana's geologic and hydrogeologic research arm, is housed on the campus of Montana Tech. Montana Tech's commitment to research is evident in significant recent investments in major instrumentation, support for creative scholarship by faculty and graduate students, and a vibrant undergraduate research program.

Inquiries to Montana Tech should be directed to 1-800-445-Tech or visit the Montana Tech website.

# The University of Montana Western < University of Montana

## The University of Montana Western

The unique mission of the University of Montana Western emphasizes experiential learning combining theory and practice through projects and field experiences. Montana Western students learn by doing, collaborating directly with their professors and fellow students in a mentorship environment.

In order to better facilitate this type of learning, UMW adopted a course scheduling system, named Experience One (X1). Under X1, students take a single course at a time for 18 days for three hours per day. Montana Western is the first and only public four-year university in the country to fully adopt this system.

Montana Western embraces the privilege and obligations associated with its mission as a higher education institution within the beautiful landscape of southwest Montana. This mission infuses the University's curriculum:

- in its century-long tradition for excellence in professional programs in teacher education, business and technology;
- in its strong interdisciplinary arts and science programs; and
- in its two-year associate degree programs responding to regional needs.

Montana Western offers the Bachelor of Science degree in:

- Elementary Education, Secondary Education with options in traditional subject areas,
- Biology,
- Business Administration,
- Early Childhood Education,
- Environmental Interpretation,
- Environmental Science,
- Health & Human Performance,
- Mathematics, and
- Natural Horsemanship.

In addition, Montana Western offers Bachelor of Arts (BA) and Bachelor of Applied Science (BAS) degrees. Bachelor of Arts options include English, Interdisciplinary Social Science, and Visual Arts. Bachelor of Applied Science students may use an Associate of Applied Science (AAS) degree as a base for the BAS degree with most of the credits from the two-year degree transferring into the BAS at Montana Western. Montana Western also offers Associate of Arts and Associate of Science degrees for those who want to obtain their general education before transferring to another campus; Associate of Applied Science degrees for those needing entry-level job skills in Business, Early Childhood Education, Education Studies, Equine Studies, Natural Horsemanship, and Tourism & Recreation; and certificate programs in Early Childhood Technology, and Information Technology & Network Administration.

Individualized education has been a campus hallmark for over 100 years. Approximately 1,400 students enroll at Montana Western each fall. Class sizes are kept small (average class size is 18 students). The faculty is nationally recognized for its excellence, creativity, and genuine concern for maintaining the Montana Western tradition of high quality academic and personal experience.



## University Of Montana

In addition to fulfilling academic life, Montana Western offers National Association of Intercollegiate Athletics Frontier Conference sports in football, volleyball, men's and women's basketball, men's and women's National Intercollegiate Rodeo Association teams, and Equestrian team competition. A varied sports program is also available for students seeking intramural activities.

With close proximity to Yellowstone, Grand Teton, and Glacier national parks, Montana Western's geographic location makes an ideal setting for individuals who enjoy the rugged outdoors. With a friendly, small town atmosphere, Dillon offers many of the amenities of a much larger community. Ranching, mining and tourism are the chief industries of the area. Montana Western's picturesque 34-acre campus and friendly atmosphere enhance the community and area. For more information visit the University of Montana Western website or call (877) 683-7331.

## Administration

### Contacts

University of Montana website (<http://www.umt.edu/>)

### Reserved Rights

The right is reserved to change any of the rules and regulations of the University at any time including those relating to admission, instruction and graduation. The right to withdraw curricula and specific courses, alter course content, change the calendar, and to impose or increase fees similarly is reserved. All such changes are effective at such times as the proper authorities determine and may apply not only to prospective students but also to those who already are enrolled in the University.

### The 2020-2021 Calendar

The 2020-2021 Academic Calendar (as well as previous and future calendars) may be viewed on the Provost Office web page.

A Listing of Important Dates and Deadlines may be viewed on the Registrar's Office Calendar web page.

## Accreditation

The University of Montana-Missoula is accredited by the Northwest Commission on Colleges and Universities (NWCCU).

Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future.

Institutional integrity is also addressed through accreditation. Accreditation by the Northwest Commission on Colleges and Universities is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding an institution's accredited status by the Northwest Commission on Colleges and Universities should be directed to the administrative staff of the institution.

Individuals may also contact:

Northwest Commission on Colleges and Universities

8060 165th Avenue N.E., Suite 100

Redmond, WA 98052

(425) 558-4224

[www.nwccu.org](http://www.nwccu.org)

Accreditation documents may be reviewed in the Provost's Office, located in University Hall Room 126.

Many of the professional schools and departments have special accreditation as well.

# University Officers

## 2021-2022 Academic Year

### Montana Board of Regents of Higher Education

- Loren Bough - Big Sky
- Todd Buchanan - Billings
- Joyce Dombrowski - Missoula
- Casey Lozar - Helena (Chair)
- Robert A. Nystuen - Lakeside
- Brianne Rogers - Bozeman
- Amy Sexton (Student Regent) - Missoula
- Clayton Christian - Commissioner of Higher Education (ex-officio)
- Greg Gianforte - Governor (ex-officio)
- Elsie Arntzen - Superintendent of Public Instruction (ex-officio)

### President's Cabinet

- Seth Bodner - President
- Kelly Webster - Chief of Staff
- Reed Humphrey - Acting Provost
- Kimber McKay - Chair, Faculty Senate
- Noah Durnell - ASUM President
- Lucy France - Legal Counsel
- Amanda Dawsey - President, UFA
- Sarah Swager - Vice Provost for Student Success
- Kent Haslam - Director, Intercollegiate Athletics
- Paul Lasiter - Vice President for Operations and Finance
- Brady Schwertfeger - Chair, Staff Senate
- Zach Rossmiller - Chief Information Officer
- Paula Short - Associate Vice President of Campus Preparedness and Response

## University Of Montana

- Alicia Arant - Director of Equal Opportunity & Title IX Coordinator
- Scott Whittenburg - Vice President for Research and Creative Scholarship and Dean of the Graduate School
- Mary Kreta - Associate Vice President for Enrollment Management
- Jenny Petty - Vice President for Marketing & Communications

## Academic Officers

- Barry Brown - Interim Dean of Libraries
- Claudine Cellier - Director of Operations, Office of the Provost
- Laurie Baefsky - Dean, College of the Arts and Media
- Thomas Gallagher - Dean, Missoula College
- Julie Baldwin - Associate Dean, College of Humanities and Sciences
- Creagh Breuner - Associate Dean, College of Humanities and Sciences
- Matt Semanoff - Associate Dean, College of Humanities and Sciences
- Reed Humphrey - Acting Provost
- Paul Kirgis - Dean, School of Law
- Adrea Lawrence - Dean, Phyllis J. Washington College of Education
- Nathan Lindsay - Vice Provost for Academic Affairs
- Marketa Marvanova - Dean, Skaggs School of Pharmacy and Acting Dean, College of Health
- Maria Mangold - Registrar
- Tim Nichols - Dean, Davidson Honors College
- Hillary Stowell - Director of Academic Budgets and Personnel, Office of the Provost
- Sarah Swager - Vice Provost for Student Success
- Suzanne Tilleman - Interim Dean, College of Business
- Alan Townsend - Dean, W.A. Franke College of Forestry and Conservation

# The Montana University System - Mission < University of Montana

## The Montana University System - Mission

The following Strategic Plan was adopted by the Board of Regents in July 2006, and updated in January 2010.

More information is available on the Office of the Provost website.

### Mission

The Mission of the Montana University System is to serve students through the delivery of high quality, accessible postsecondary educational opportunities, while actively participating in the preservation and advancement of Montana's economy and society.

### Vision

We will prepare students for success by creating an environment of ideas and excellence that nurtures intellectual, social, economic, and cultural development. We will hold academic quality to be the prime attribute of our institutions, allocating human, physical, and financial resources appropriate to our educational mission. We will encourage scientific development and technology transfer, interactive information systems, economic development and lifelong learning. We will protect academic freedom, practice collegiality, encourage diversity, foster economic prosperity, and be accountable, responsive, and accessible to the people of Montana.

### Introduction

The Montana University System Strategic Plan is the primary planning document of the Board of Regents. The Plan sets forth an agenda for higher education in Montana by delineating the strategic directions, goals, and objectives that guide the Montana University System (MUS).

### History

In July 2006, after several years of study, public dialogue, and internal deliberations, the Board of Regents approved the Strategic Plan. Since then, updates have occurred annually, including revisions to strategic initiatives as well as a refreshing of the data within each goal. The development of the Strategic Plan began with two primary initiatives.

The first was to work more closely with the interim legislature to develop a set of mutually agreed upon accountability measures that would guide the MUS and evaluate progress. Working with the Postsecondary Education Policy and Budget (PEPB) subcommittee of the 57th Legislature, the Board of Regents did develop this set of accountability measures in July 2002. Subsequently, the PEPB subcommittee has updated the accountability measures. This latest set of agreed-upon measures evolved into "shared policy goals" and work to form one base for this strategic plan.

## University Of Montana

The second initiative was to work with the PEPB Subcommittee to explore new ways for the MUS take a more direct leadership role in the state's economic development. This overall effort, called "Shared Leadership for a Stronger Montana Economy", engaged a broad range of Montanans to prioritize specific initiatives that would help establish a new role for the MUS in strengthening the state's economy. The Governor's Office and several legislative interim committees were included in the effort.

In July 2004, the Board of Regents and the PEPB subcommittee met jointly and agreed on three priority initiatives for immediate implementation:

Develop stronger business-university system partnerships for workforce training;

Remove barriers to access for postsecondary education; and

Expand distance learning programs and training.

## Goals

The Strategic Plan is comprised of three primary goals that contain a series of sub-goal statements and objectives within each area.

### Goal 1: Access & Affordability

Increase the overall educational attainment of Montanans through increased participation, retention and completion rates in the Montana University System.

### Goal 2: Workforce & Economic Development

Assist in the expansion and improvement of the state's economy through the development of high value jobs and the diversification of the economic base.

### Goal 3: Efficiency & Effectiveness

Improve institutional and system efficiency and effectiveness Maintaining the high quality of our institutions and the education provided to our students is not listed as an explicit goal. This is because it is THE MOST IMPORTANT consideration for every goal and initiative of the Montana University System and is considered to be an integral part of every component of this strategic plan.

# University of Montana - Missoula Strategic Goals < University of Montana

## University of Montana - Missoula Strategic Goals

The planning context for the University of Montana is framed by the Montana Board of Regents Strategic Plan. The UM Strategic Plan is also known as Core Themes. It is updated annually and its progress is continuously monitored through the compilation and analysis of key outcomes data.

The following five strategic issues form the foundation of the new UM Strategic Plan. The degree to which the University of Montana attends and adheres to these goals will ultimately determine its continued success and value.

### **PARTNERING FOR STUDENT SUCCESS**

The University will help its students succeed academically and personally so they graduate well-prepared for their careers or further education. The Partnering for Student Success plan identifies six key objectives critical to student success and sets forth actions to promote a successful first year for entering freshmen and to address the needs of returning students. UM seeks to improve students success by addressing their preparedness for college-level work, improving their transition to college, providing an integrated early curriculum, increasing student engagement and support, and emphasizing faculty and staff development. As part of the plan, UM created the Office for Student Success, which is charged with developing, implementing, and coordinating initiatives to increase students persistence toward graduation.

### **EDUCATION FOR THE GLOBAL CENTURY**

UM will offer an educational experience at all degree levels that provides graduates the foundation to make positive impacts on a world that is increasingly interconnected. The University's Academic Strategic Plan, endorsed by the Faculty Senate in 2009, identified the need to create a gateway-to-discovery experience focused on the challenges of the global century for all incoming students at each level of postsecondary education. At the same time, the University recognizes the need to support and strengthen foundational academic programs. For all students, curricula will focus on producing workers and leaders who make a difference in the cultural and economic fabric of Montana and the world.

### **DISCOVERY AND CREATIVITY TO SERVE MONTANA AND THE WORLD**

The University will transform discovery and creativity into knowledge, applications and experiences in ways that benefit the state, region, nation and world. Scholarship, research, and creative work are central to the lives of faculty, students, and staff, and to academic programming at the University of Montana. Therefore, UM supports research, scholarship, and creative work across the natural and physical sciences, social and behavioral sciences, arts, and humanities, and works to enhance opportunities for interdisciplinary connections. By fostering an entrepreneurial spirit in the community of research and technology, UM transforms discovery into application.



## **DYNAMIC LEARNING ENVIRONMENT**

UM will enhance its character as a place where people are passionate about learning, discovery and growth. The University of Montana is consistently recognized as one of the most attractive and enticing campuses in the nation. Community and campus engagement literally means that the lives of the students, faculty, staff, alumni, and friends of the University are centered on the campus. Examples range from sold-out athletic events that feature perennial championship teams, to galleries, campus theaters, and arenas filled to capacity for performances featuring local and world famous artists. UM builds a vibrant and dynamic learning environment, where the natural surroundings are integrated into the curriculum.

## **PLANNING-ASSESSMENT CONTINUUM**

The University will model transparency, systematic communication and sound decision-making to ensure that resources are marshaled to achieve UM s mission. The Planning-Assessment Continuum characterizes a cultural orientation of the University of Montana designed to facilitate desired outcomes, clarify the University s vision and mission, and communicate and demonstrate to internal and external stakeholders that the University is making the best use of its resources. Executive leadership provides communication of mission and vision, clear and consistent processes, overarching mission-driven goals, equitably applied parameters, and rules enforcement, while faculty, staff, and students provide ideas, process improvements, work, action, and other vital contributions to the direction of the University.

# University of Montana Missoula - Mission < University of Montana

## University of Montana Missoula - Mission

### Mission

University of Montana-Missoula pursues academic excellence as demonstrated by the quality of curriculum and instruction, student performance, and faculty professional accomplishments. The University accomplishes this mission, in part, by providing unique educational experiences through the integration of the liberal arts, graduate study, and professional training with international and interdisciplinary emphases. The University also educates competent and humane professionals and informed, ethical, and engaged citizens of local and global communities; and provides basic and applied research, technology transfer, cultural outreach, and service benefiting the local community, region, State, nation and the world.

### Vision Statements

In pursuit of its mission, University of Montana-Missoula will:

1. Educate students to become ethical persons of character and values, engaged citizens, competent professionals, and informed members of a global and technological society.
2. Increase the diversity of the students, faculty, and staff for an enriched campus culture.
3. Attain the Carnegie Commission status of Doctoral Research Extensive University (50 or more doctorates in at least 15 fields annually) and increase funded research to \$100,000,000 annually by 2011.
4. Pursue more partnerships especially with local communities, businesses and industries, public schools, community and tribal colleges, state and local governments and universities abroad and expand the training and technology transfer programs to promote community and economic development.
5. Develop the capability and infrastructure for use of information technology to increase the efficiency and productivity of the campus and the state; and
6. Involve and engage the faculty, staff, students, alumni, partners, and friends of the University in institutional governance.

### Equal Opportunity

University of Montana is committed to a program of equal opportunity for education, employment and participation in University activities without regard to race, color, gender, age, religion, creed, political ideas, marital or family status, physical or mental disability, national origin or ancestry, gender identity, or sexual orientation.

## Accounting (ACTG)

### **ACTG 101 - Accounting Procedures I. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Basic double-entry accounting. Emphasis on analyzing, journalizing, and posting transactions; trial balance, worksheet, financial statements, and adjusting/closing procedures, accounting systems, and cash control.

### **ACTG 102 - Accounting Procedures II. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., ACTG 101. Expansion of ACTG 101 including receivables, inventories, plant and intangible assets, and expanded liabilities. Includes partnerships, corporations, long-term liabilities, investments in debt and equity securities, and the statement of cash flows. Also includes an introduction to QuickBooks.

### **ACTG 130 - Applied Accounting & Decision Making. 3 Credits.**

Offered autumn and spring at Missoula College. Prereq., ACTG 101 and BGEN 105S. This course is designed to introduce the QuickBooks software for both a service business and merchandising business. We will set up a chart of accounts, and process accounts receivable, accounts payable, inventory, and payroll. Preparation and analysis of financial statements will be emphasized. In addition, we will develop data driven decision making skills through the use of those financial reports. Course includes multiple case studies.

### **ACTG 180 - Payroll Accounting. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Payroll Topics including Federal and Montana state payroll tax law. The course includes study of workers compensation, independent contractor determination and registration, preparation of payroll, payroll tax returns and deposits, and annual information payroll returns. Students will also be exposed to federal law affecting payroll such as Fair Labor Standards Act, ADA, Family Medical Leave Act, Civil Rights Act, etc. and applicable Montana state laws.

### **ACTG 191 - Special Topics. 1-6 Credits.**

### **ACTG 192 - Independent Study. 1-9 Credits.**

Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **ACTG 201 - Principles of Financial Accounting. 3 Credits.**

Offered every term. Prereq. or Coreq. M 115, M 121, M 151 or M 162. Introduction to financial accounting concepts, including transactions analysis, financial statement analysis, and corporate financial reporting practices.

### **ACTG 202 - Principles of Managerial Accounting. 3 Credits.**

Offered every term. Prereq., ACTG 201 and M 115, M 121, M 151 or M 162. Continuation of ACTG 201 with a focus on managerial accounting topics.

### **ACTG 211 - Income Tax Fundamentals. 4 Credits.**

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Offered autumn. Offered at Missoula College. Prereq., ACTG 180 with a C grade or better. This class is a comprehensive overview of individual income taxation. It includes an introduction to taxation terminology, taxation principles and an overview of retirement plans/tax ramifications for small businesses/individuals. Individual taxation is taught through preparation of a series of tax returns. Course emphasis is on individuals and sole proprietorships.

### **ACTG 215 - Fundamentals of Government and Nonprofit Accounting. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., ACTG 101 and 102 or consent of instructor. Principles of accounting for governmental units, health care organizations, colleges and universities, and other nonprofit organizations.

### **ACTG 250 - Accounting Capstone. 4 Credits.**

Offered Spring. Offered at Missoula College. Prereq., ACTG 101-102 or ACTG 202 and ACTG 180, or equivalent and consent of instructor. A culmination to all course work done in accounting core; this is a preparation class for the accounting workplace. Course will utilize accounting software to apply learned technical skills. This course requires completion of a comprehensive practice set in financial accounting, ratio analysis and spreadsheet utilization. This course also serves to sharpen students' writing, presenting and critical thinking skills.

### **ACTG 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACTG 292 - Independent Study. 1-3 Credits.**

### **ACTG 298 - Internship. 1-3 Credits.**

(R-3) Offered autumn and spring. Offered on Mountain Campus and at Missoula College. Prereq., last semester in program, minimum grade of "C" in all ACTG courses, and approval of program director. On-the-job training in positions related to the accounting field. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of six hours each week at an approved site and attend scheduled one-hour seminars. Offered for CR/NCR grading only.

### **ACTG 304 - Accounting Lab. 1 Credit.**

Offered every term. Prereq., ACTG 201 with a grade of C or better. Applying accounting cycle concepts to comprehensive hands-on financial statement cases and/or a practice set and exploring career options. This is the first course for those students taking intermediate accounting courses.

### **ACTG 305 - Corporate Reporting I. 3 Credits.**

Offered every term. Prereq., ACTG 201; prereq., or corereq., ACTG 202. Topics include concepts in financial accounting, assets and related income statement accounts.

### **ACTG 306 - Corporate Reporting II. 3 Credits.**

Offered every term. Prereq., junior standing in Business, ACTG 202 and ACTG 305 with a grade of C or better, or consent of instr. Continuation of ACTG 305. Topics include concepts in financial accounting, coverage of the liability and equity side of the balance sheet, the cash flow statement, and several special financial

## University Of Montana

accounting topics.

### **ACTG 307 - Corporate Reporting III. 3 Credits.**

Offered spring. Prereq., junior standing in Business and ACTG 306, or consent of instr. Application of accounting principles to complex issues such as post-retirement benefits, accounting changes, bankruptcies, reorganizations, income taxes and other topics.

### **ACTG 321 - Accounting Information Systems I. 3 Credits.**

Offered autumn. Prereq., junior standing in Business. Provides thorough understanding of business processes, risks, and internal controls. Computer applications may be used to demonstrate concepts.

### **ACTG 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACTG 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **ACTG 394 - Undergraduate Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **ACTG 401 - Federal Income Taxation. 3 Credits.**

Offered autumn. Prereq., Junior standing in Business or consent of instr. Prereq., or coreq., ACTG 306. The application of the federal income tax law to determine income, deductions and losses. Special topics include property transactions.

### **ACTG 409- Financial Reporting & Controls. 3 Credits.**

Offered spring. Prereq., admission to Certificate in Business. Reporting and using financial information of an enterprise, with a focus on internal and external decision-making for non-business majors. Topics include analysis and recording financial transactions, understanding how these events affect financial statements, and using quantitative tools for internal decision-making. Level: Undergraduate

### **ACTG 410 - Cost Management Accounting I. 3 Credits.**

Offered autumn and/or spring. Prereq., junior standing in business or consent of instr. The study of cost management for business and other organizations. Emphasis on how information about costs helps managers make better decisions.

### **ACTG 411 - Auditing I. 3 Credits.**

Offered spring. Prereq., junior standing in Business, ACTG 321 and ACTG 306, or consent of instr. Introduction to auditing with emphasis on the independent audit of financial statements. Coverage includes professional standards, ethics, audit risk, evidence, internal controls, procedures, opinions, operational and compliance auditing.

### **ACTG 420 - Cost Management Accounting II. 3 Credits.**

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Offered intermittently. Prereq., senior standing in Business and ACTG 410 or consent of instr. Advanced cost management with emphasis on how financial and non-financial information helps managers make better decisions in a wide variety of business and not-for-profit organizations. Current readings in cost management and related topics.

### **ACTG 425 - State and Local Government Accounting. 2 Credits.**

Offered spring. Prereq., junior standing in Business or consent of instr. Prereq., or coreq., ACTG 306. Reporting requirements and generally accepted accounting principles applicable to state and local governmental units.

### **ACTG 426 - Accounting for Nonprofits. 1 Credit.**

Offered spring. Prereq., junior standing in Business or consent of instr. Prereq., or coreq., ACTG 306. Reporting requirements and generally accepted accounting principles applicable to nonprofit entities, including colleges/universities.

### **ACTG 432 - Income Tax Practicum. 1 Credit.**

Offered spring. Prereq., junior standing in Business. Service course that provides free tax preparation to low income taxpayers and students, in conjunction with the IRS. Students apply their knowledge of tax law to the preparation and e-filing of income tax returns under the direction of a practicing CPA. Designated as a service learning course. Graded credit/no credit only.

### **ACTG 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACTG 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of inst.

### **ACTG 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **ACTG 498 - Internship. 1-3 Credits.**

Offered every term. Prereq., junior standing in Business and consent of instr. Students are placed with private or governmental organizations to receive on-the-job training. Written reports are required. A maximum of 3 credits count toward graduation.

### **ACTG 509 - Financial Reporting & Control. 3 Credits.**

Online course. Offered spring. Prereq., admission to M.B.A. or M-Acct. program or graduate standing with consent of graduate business program director. Reporting and using financial information of an enterprise, with a focus on internal and external decision-making. Topics include analysis and recording financial transactions, understanding how these events affect financial statements, and using quantitative tools for internal decision-making. Level: Graduate

### **ACTG 605 - Administrative Controls. 2 Credits.**

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Offered autumn. Prereq., admission to the M.B.A. program. Not open to M-Acct. students. The application of accounting information to managerial and financial decision making. Level: Graduate

### **ACTG 610 - Accounting & Data Analytics. 3 Credits.**

Offered autumn. Blended course. Prereq., ACTG 306 or consent of instructor. An exploratory, high-level study of issues surrounding data and data analysis in accounting using large data sets to become an intelligent data consumer, data user, and information communicator as a professional accountant.

### **ACTG 615 - Accounting Theory. 3 Credits.**

Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, Business core, accounting core, and admission to M-Acct. program or consent of accounting graduate director. A critical analysis of the concepts underlying the development and application of financial accounting in the United States. Coverage of current accounting standards as well as other current topics in financial accounting. Level: Graduate

### **ACTG 616 - Advanced Financial Topics. 3 Credits.**

Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, business core, accounting core, admission to M-Acct. program or consent of accounting graduate director. Study of financial accounting topics requiring complex treatment. Level: Graduate

### **ACTG 631 - Advanced Tax. 3 Credits.**

Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, ACTG 401, admission to M-Acct. program or consent of accounting graduate director. The application of the federal income tax law to corporations and partnerships, and special problems associated with taxation of trusts, estates and gifts. Level: Graduate

### **ACTG 632 - Advanced Income Tax Practicum. 1 Credit.**

Offered spring. Prereq., graduate student in business or consent of accounting graduate director and instr. Service course that provides free tax preparation to low income taxpayers and students, in conjunction with the IRS. Graduate students apply their knowledge of tax law to the preparation and e-filing of income tax returns under the direction of a practicing CPA, review the work of undergraduate preparers, and assist in the organization and training of undergraduate preparers. Designated as a service-learning course. Grade option credit/no credit only. Level: Graduate

### **ACTG 641 - Advanced Auditing. 3 Credits.**

Offered autumn or spring. Prereq., admissions to M-Acct., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, ACTG 411, graduate student in business or consent of accounting graduate director. Research cases in auditing and coverage of contemporary topics in auditing, typically including attestation standards, other reports and services, legal and ethical environment, and fraud detection. Level: Graduate

### **ACTG 643 - Fraud/Forensic Accounting. 2-3 Credits.**

Offered intermittently. Prereq., admission to M-Acct., with grade of B or better in ACTG 321 and 411 or equivalents, or consent of M-Acct. director. A study of fraud motivations, techniques, prevention, and detection. Includes the study of forensic accounting using forensic science, information security, and other

## University Of Montana

forensic auditing/investigation tools and techniques, as they apply in various fraud and financial contexts.  
Level: Graduate

### **ACTG 661 - Accounting Law & Ethics. 3 Credits.**

Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, Business core, admission to M-Acct. program or consent of accounting graduate director. Legal issues from the common law and appropriate statutes applicable to the public practice of accounting. The professional responsibilities and ethics of a practicing CPA. Level: Graduate

### **ACTG 675 - Contemporary Accounting Problems. 1-4 Credits.**

(R-4) (R-4) Prereq., consent of MAcct Director. Consent will not be granted in the case of CPA exam scores less than sixty. Open to MAcct students in good standing with instructor's consent who are taking their last required accounting courses. Integration of accounting theory and practice. Primarily for the student preparing to take the uniform CPA examination. Graded only credit/no credit. Level: Graduate.

### **ACTG 694 - Seminar. 1-3 Credits.**

(R-15) Offered intermittently. Prereq., graduate student in business or consent of business graduate director. Selected topics in accounting. Level: Graduate

### **ACTG 695 - Special Topics. 1-9 Credits.**

### **ACTG 696 - Independent Study. 1-9 Credits.**

(R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Directed study of individual or small groups of students in topics not available in scheduled classes. Level: Graduate

### **ACTG 698 - Internship. 1-3 Credits.**

(R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Placements with private or governmental organizations for practical training. Written reports required. Level: Graduate

### **ACTG 699 - Thesis. 1-6 Credits.**

(R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director. Grade option credit/no credit only. Level: Graduate



## Activities (ACT)

### **ACT 101 - Stretch and Relax. 1 Credit.**

(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 103 - Jump Rope Fitness and Skill. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 105 - Aerobic Fitness. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 106 - Beginning Conditioning and Fitness. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 107 - Beginning Aerobic Dance. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 109 - Beginning Racquetball. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 110 - Beginning Weight Training. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 111 - Beginning Weight Training - Women. 1 Credit.**

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Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 112 - Curling. 1 Credit.**

(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Students will learn the curling rules, scoring, etiquette, basic strategies, methods and styles of stone deliver. In addition, how to "read" the ice/call for sweeping, most effective sweeping techniques, and the different positions on a curling team will be taught.

### **ACT 114 - Beginning Rock Climbing. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 123 - Bouldering. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 124 - Flow Arts. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 125 - Acro Yoga. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 128 - Aerial Arts Fundamentals. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 129 - Circuit Training. 1 Credit.**

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(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Upon completing this course, the student will be able to develop their strength, endurance, and flexibility by participating in various fitness programs or sports, demonstrate proper form and skills for various fitness programs, and recognize and demonstrate appropriate fitness etiquette.

### **ACT 130 - Pole Fitness & Dance. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Learn basic turns, spins and strengthening techniques to mount and climb the pole. Create dance combinations and learn tricks and poses that are broken down into comprehensive step-by-step instructions. Delve deeper into inversions and combinations, as well as expand on skills and tricks.

### **ACT 136 - Aerial Yoga. 1 Credit.**

(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. This course teaches traditional Hatha yoga with an aerial hammock, aiding the student in postures. In order to accumulate a person who is new to yoga, the aerial hammock offers the body assistance to find correct alignment and decompression of the spine without pressure on the head or hands.

### **ACT 137 - Capoeira Angola. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Students will learn the basic elements of Capoeira Angola as a game, rather than the mainstream advertised martial art. Through this practice, we will train the brain and the body to use intuition as a source of choice making. We will push to accelerate of what to do, deciding to do, and doing it.

### **ACT 138 - Olympic-Style Weightlifting. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 139 - Parkour. 1 Credit.**

(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 140 - Beginning Basketball. 1 Credit.**

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Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 143 - Beginning Table Tennis. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 145 - Beginning Dodgeball. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 146 - Beginning Golf. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 147 - Oula Fitness. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 150 - Beginning Yoga. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 151 - Beginning Billiards. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 152 - Beginning Handball. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

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### **ACT 154 - Beginning Tai Qi. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 156 - Beginning Aikido. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 157 - Beginning Martial Arts. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 158 - Beginning Taekwondo. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 160 - Avalanche 1 Training. 1 Credit.**

This Avalanche Level 1 course is for skiers or snowboarders who want to recreate in or near avalanche terrain. The focus is an introduction to avalanche terrain and decision making. Successful students will receive a certificate of completion through the American Avalanche Institute (AAI). All classroom and field sessions are mandatory to attend. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 163 - 5/10 K Race Training. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 169 - Beginning Tennis. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 170 - Beginning Swimming. 1 Credit.**

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Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 171 - Physical Fitness I. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 172 - Physical Fitness II. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 173 - Beginning Fly Fishing/Fly Tying. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 174 - Introduction to Backpacking. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 175 - Fly Fishing. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 176 - Fundamentals of Whitewater Rafting. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 177 - Fundamentals of Kayaking. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

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### **ACT 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACT 202 - Intermediate Racquetball. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. An intermediate course for the sport of racquetball. Students should have a fundamental understanding of the sport, including the rules of the game and its variations, and the necessary equipment. Intermediate-level instruction will focus more on stroke mechanics, and strategies. Students will also be learning the enjoyment of playing racquetball, which is a game that can last a lifetime.

### **ACT 207 - WC Aerobics. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 210 - Intermediate Weight Training. 1 Credit.**

(R-4) Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 214 - Intermediate Rock Climbing. 2 Credits.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 215 - Climbing Wall Instructor. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. This course will address the technical skills necessary to manage an instructional program at an indoor climbing wall facility and will address the following general topic areas: instructor roles, responsibilities and professionalism, client orientation and instruction, risk management, lesson planning, teaching basic climbing skills, including movement, teaching lead climbing skills, teaching top-rope and lead belaying techniques, use of available equipment and facility, basic rescue and emergency procedures.

### **ACT 218 - Ultimate Disc. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class

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Program website.

### **ACT 222 - Ski Camp. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 225 - Snow Bowl Ski Area. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 228 - Ski Instructor's Preparation. 2 Credits.**

Prereq., consent of instr. Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Open to all students with advanced to expert skiing skills. Techniques of teaching skiing including: skill concepts and contemporary skiing movements; teaching cycle; movement analysis; personal skiing improvement. Prepares student for certification with (PSIA) Professional Ski Instructors of America.

### **ACT 229 - Snowboard Instructor Prep. 2 Credits.**

Prereq., consent of instr. Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website. Open to students with advanced to expert riding skills. Techniques of teaching snowboarding including: skill concepts and contemporary snowboarding movements; teaching cycle; movement analysis; personal riding improvement. Prepares student for certification with (ASSI) American Association of Snowboard Instructors.

### **ACT 231 - Pilates - Yoga Fusion. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 232 - Argentine Tango. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 235 - Belly Dancing. 1 Credit.**



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Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 237 - Trampoline Arial Acrobatics. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 239 - Meditation. 1 Credit.**

The purpose of this course is to introduce students to time-tested and lab-tested meditation practices that will help cultivate more presence, compassion and connection in their lives. This course is an exploration of practices that increase understanding of the nature of the mind, the self and reality. Students will explore these practices through the lens of personal, community, and world. Each class students will study, contemplate, and practice various teachings and meditations through personal reflection, journaling, partnering and group discussion. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 250 - Pilates. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 257 - Martial Arts and Self Defense. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 259 - AAK American Kenpo. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 271 - Swimming for Fitness. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 274 - Scuba Diving. 1 Credit.**

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Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 286 - Fencing. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 287 - Strength & Flexibility. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

### **ACT 291 - Special Topics. 1-6 Credits.**

(R-6) Offerings of visiting professors, new courses, or current topics.

### **ACT 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of advisor and instr. Course material appropriate to the needs and objectives of the individual student.

### **ACT 391 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACT 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **ACT 491 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ACT 492 - Independent Study. 1-3 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **ACT 494 - Workshop. 1-6 Credits.**

(R-6) Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

### **ACT 498 - Internship. 2-6 Credits.**

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(R-6) Prereq. all INPH concentrations minimum junior standing and ECP 120/121 (or equivalent). Prereqs per concentration. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must take KIN 410 and COA 405 as corequisites. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must take KIN 460/483/484 as corequisites. Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 16 credits their internship semester.

### **ACT 499 - Capstone. 1-3 Credits.**

(R-6) Prereq., consent of instr. Independent work under the University omnibus option. See index.

## Activities - Varsity (ACTV)

### **ACTV 189 - Varsity Athletics. 1 Credit.**

Students may include up to but not more than 4 credits earned in activity (ACT) courses numbered 100-299 in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered, go to the ACTivity Class Program website.

## Administrative Management (AMGT)

### **AMGT 192 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **AMGT 198 - Internship. 1-6 Credits.**

(R-6) Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **AMGT 240 - Administrative Support for the Office. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CAPP 154. Overview of the procedures and scope of the administrative assistant's role in today's automated office, including traditional and electronic communications, operation of multi-media equipment, and managing office technology.

### **AMGT 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AMGT 298 - Administrative Management Internship. 2 Credits.**

Offered autumn and spring. Prereq., recommend last semester in program, minimum of "C" in program courses, and approval of program director. On the job training in positions related to student's career goal in the administrative field. This experience increases students' skills, prepares them for initial employment and increases occupational awareness and professionalism. Students work a approximately six hours each week at an approved site and attend career readiness workshops. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Offered for CR/NCR grading only.

### **AMGT 299 - Integrated Office Capstone. 3 Credits.**

Offered spring semester. Offered at Missoula College. Prereq., AMGT 240, or consent of instructor. A culmination of all coursework in the administrative management core. This course requires completion of an integrated project where students prepare effective and attractively designed business communication documents, spreadsheet utilization, data analysis and presentations. This course serves to hone students' word-based skill in customer service, project management, resource utilization, fundamental business office procedures, communication, writing and critical thinking.

## African-American Studies (AAST)

### **AAST 141H - Black: From Africa to Hip-Hop. 3 Credits.**

Offered annually. This course introduces students to the primary questions, themes, and approaches to African-American Studies. In addition to examining key historical periods such as Reconstruction, the Harlem Renaissance, and the Civil Rights era, students will encounter Hip-Hop, African-American film, African-American religion, and contemporary identity politics. This course concludes by discussing the reasons for and new directions in African-American studies, including diaspora studies, Pan-Africanism, and post-colonial studies. Overall students will gain new insight into the social, cultural, political, and intellectual, experiences of a diverse people and into the history and contemporary experience of the United States.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **AAST 208H - Africa: From Ancient Egypt to Apartheids Origin. 3 Credits.**

Offered intermittently. Interdisciplinary study of the history of pre-colonial Africa, focusing on social, economic, political and cultural institutions and traditions including the wealth, diversity and complexity of ancient and classical African civilizations and cultures.

Gen Ed Attributes: Historical Studies

### **AAST 225 - Race, Inequality & Education. 3 Credits.**

Offered intermittently. This seminar-style honors course revolves around the question, "What is the relationship between racial inequality and education?" and explores how school systems in the United States have perpetuated racial inequality, while also considering if and how schools could instead work to combat racial inequality.

### **AAST 250 - Human Rights and Mass Incarceration. 3 Credits.**

This course examines the historical development of prisons and policing in the United States and how these two mechanisms have been used as a form of social control, specifically against people of African descent. Explore themes such as convict leasing, the war on drugs, the prison-industrial complex, political prisoners in the United States and the school-to-prison pipeline among other vital issues.

### **AAST 260 - African Americans and Native Americans. 3 Credits.**

Offered intermittently. A study of the broad scope of relations between African Americans and Native Americans in colonial and United States history. Topics explored through history, sociology, and cultural anthropology.

### **AAST 291 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AAST 360 - White Supremacy - History/Defeat. 3 Credits.**

## University Of Montana

This course equips students to articulate and identify the history and development of key white supremacist groups in the U.S.; discuss the benefits and drawbacks of strategies used by key anti-racism groups in the U.S.; and implement and evaluate a project to dismantle white supremacy in the U.S. Usually includes a field trip to anti-racism conference.

### **AAST 372 - African-American Identity. 3 Credits.**

Offered intermittently. Interdisciplinary course designed to explore and illuminate the multifaceted nature and development of African-American group and individual identity.

### **AAST 375 - Black Women: Race, Gender and Sexuality. 3 Credits.**

Offered intermittently. This course offers an interdisciplinary examination of the historical and contemporary experiences of black women in the United States from the Antebellum Era through the present. The course explores key themes including labor and class, gender and sexual violence, as well as individual and collective forms of resistance.

### **AAST 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AAST 392 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **AAST 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AAST 492 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **AAST 499 - Capstone/Thesis. 1-6 Credits.**

(R-6) Prereq., consent of instr.

## Allied Health Medical Assist (AHMA)

### **AHMA 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHMA 201 - Medical Assistance and Clinical Procedures I. 4 Credits.**

Offered autumn. Offered at Missoula College. Skill development necessary to assist health care practitioners in all aspects of patient care in the medical office clinical setting. Includes achieving competency in prepping patients for a physical examination, charting, medication administration, basic medical laboratory skills.

### **AHMA 203 - Medical Assistance and Clinical Procedures II. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., AHMA 201. This course builds on skills learned in AHMA 201 and includes body systems and pathophysiology review, and development of skills in the following areas: immunization administration, specimen collection, CLIA waived lab testing, care of lab equipment, spirometry, electrocardiogram, and phlebotomy.

### **AHMA 260 - Medical Assistance Lab 1. 2 Credits.**

Offered at Missoula College. Coreq., AHMA 201. This course introduces the student to basic skills of medical assisting. Included in this course are standard procedures, aseptic and sterilization procedures, vital signs, assisting with general exams, urinalysis, and drug administration.

### **AHMA 262 - Medical Assistance and Laboratory Procedures 2. 2 Credits.**

Offered at Missoula College. Prereq., AHMA 201 and 260. Corereq., AHMA 203. This course builds on skills learned in AHMA 260 and moves into areas of greater specialization. Included in this course are CLIA-waived and hematological testing, ECG, venipuncture, assisting with surgical procedures, wound care, and specialty exams.

### **AHMA 280 - Medical Assisting Exam Prep. 3 Credits.**

Offered at Missoula College. This course is designed for students completing the Medical Assisting Program. The primary objective and focus will be preparing students for AMT (American Medical Technologists) for a Registered Medical Assistant Credential.

### **AHMA 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHMA 298 - Medical Assisting Externship. 5 Credits.**

Offered spring. Offered at Missoula College. Prereq., consent of instructor. Placement in a medical office for a guided experience providing the student with a practical application of learned medical office administrative skills. Direct supervision will be the responsibility of a designated person at the site. The students will spend 20 hours per week for 10 weeks, for a total of 200 hours in assigned clinical rotations. Offered for CR/NCR only.



## Allied Health Medical Support (AHMS)

### **AHMS 144 - Medical Terminology. 3 Credits.**

Offered every term. Introduction to a medical word building system using Greek and Latin word roots, combining forms, suffixes, and prefixes.

### **AHMS 156 - Medical Billing Fundamentals. 3 Credits.**

Offered at Missoula College. Prereq. or coreq., AHMS 220 or consent of instructor. An introduction to insurance claim processing for the major medical insurance programs. Students will be provided with a basic knowledge of CPT and ICD-10 procedural and diagnostic coding. Emphasis on completing universal insurance forms to maximize reimbursement as well as troubleshoot denied or underpaid claims.

### **AHMS 160 - Beginning Procedural Coding. 3 Credits.**

Offered at Missoula College. Prereq., AHMS 156 and BIOH 112 or consent of instructor. Foundation for utilizing the CPT coding system to increase compatibility and comparability of medical data among users and providers.

### **AHMS 164 - AHMS 164 Beginning Diagnosis Coding: ICD-10. 3 Credits.**

Offered at Missoula College. Prereq., AHMS 156 and BIOH 112. This course covers basic and intermediate levels of theory and application of ICD-CM principles and guidelines for coding and sequencing diagnoses and procedures. Students perform basic and intermediate coding using real health records, case studies, and scenarios. Application will focus on the use of the electronic ICD-10-CM with an overview of encoder software. This coding class involves hands-on coding, and knowledge of basic use of applicable coding books or the electronic ICD-10-CM. Currently the students take this course through Great Falls

### **AHMS 175 - Medical Law & Ethics. 2 Credits.**

Offered at Missoula College. This course will introduce students to the common laws, regulations, and agencies affecting ambulatory medical facilities. Current issues of ethics and bioethics will also be discussed. This is a blended class.

### **AHMS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHMS 192 - Independent Study. 1-9 Credits.**

Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **AHMS 212 - CPT Coding. 3 Credits.**

Offered at Missoula College. Prereq., 160 and AHMS 201 (taken through Great Falls-MSU) or consent of instructor. Comprehensive application of the CPT coding system to assign codes for services, supplies and equipment for comparative analysis, research and reimbursement.

### **AHMS 213 - ICD-10 CODING. 3 Credits.**

## University Of Montana

Offered at Missoula College. Prereq., AHMS 164 and AHMS 201 (taken at Great Falls-MSU). Basic understanding of diagnostic and procedural coding principles should already be established. The course requires interpreting ICD-10-CM coding and reporting guidelines to sequence and assign appropriate diagnostic codes for both inpatient and various outpatient settings. Compliance issues associated with various IPPS reimbursement systems such as MS-DRGs, as well as APCs are covered. Encoder software will complement the ICD-10-CM manual in the application of coding processes. Clinical information will be interpreted from brief case studies and progress to the coding of health record excerpts.

### **AHMS 216 - Pharmaceutical Products. 3 Credits.**

Offered at Missoula College. Fundamental principles of pharmacology and the implications of medication use. Includes the law as it pertains to drug use, dosage forms, routes of administration as well as the pharmacologic actions and uses of drugs.

### **AHMS 220 - Medical Office Procedures. 4 Credits.**

Offered at Missoula College. An introduction to the necessary skills and qualities required to function successfully in the medical arena. Emphasis on medico-legal and ethical responsibilities, records management and financial management of the medical practice, and interpersonal communications to include patient reception, telephone techniques and appointment scheduling.

### **AHMS 245 - Simulated Lab. 3 Credits.**

Offered Spring. Offered at Missoula College. Prereq., consent of instructor. This course will use computer applications and software in maintaining health information in medical records through practice utilizing HIT applications through the AHIMA Virtual Lab, to include the following applications: Master Patient Index, Electronic Health Record, Encoder, Abstracting, Chart Tracking, Release of Information.

### **AHMS 252 - Computerized Medical Billing. 3 Credits.**

Offered at Missoula College. Prereq., or coreq. AHMS 156 and AHMS 220; or consent of instructor. A medical package is used to enter and update patient data, enter charges, payments and adjustments, and generate management reports, insurance forms, and patient statements.

### **AHMS 270E - Medical Ethics. 3 Credits.**

Offered every term. Offered at Missoula College. Ethical decision-making tools for addressing common ethical issues in the health professions.

Gen Ed Attributes: Ethical & Human Values Course

### **AHMS 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHMS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **AHMS 298 - Medical Information Internship. 3 Credits.**

## University Of Montana

Offered at Missoula College. Prereq., enrolled in final semester in program, minimum of "C" in Allied Health Medical Support courses, and recommendation of program director. On-the-job training in positions related to each student's career goal in the medical office field. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of 135 hours at an approved site and attend a scheduled one-hour seminar. Offered for CR/NCR grading only.

## Allied Health Respiratory Care (AHRC)

### **AHRC 101 - Communication Management. 1 Credit.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Study of respiratory care departmental organization and administration procedures, effective communication strategies, and legal and ethical issues for the Respiratory care professional.

### **AHRC 129 - Patient Care & Assessment. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program and BIOH 201N-202N. Introduction to nursing- related knowledge and skills with emphasis on application of microbiology to aseptic technique. Assessment of the respiratory system with cardiopulmonary diagnostic and laboratory tests interpretation. Observation and interpretation of overall patient condition is integrated throughout the course.

### **AHRC 131 - Respiratory Care Fundamentals I. 5 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into the Respiratory Care program. Orientation to basic respiratory care science including the application of principles of physics and chemistry. Emphasis on theory, operation and troubleshooting of equipment used at the entry level of practice. Introduction to airway pharmacology. Principles of basic chemistry introduced with an application to pharmacology as related to the pulmonary system.

### **AHRC 132 - Respiratory Care Fundamentals II. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into the Respiratory Care program and AHRC 131. Study of the indications, rationale, methods, instrumentation, and analysis of Blood Gases. Emphasis will be placed on the physiology and clinical implications of acid-base abnormalities. Cardiovascular and related pharmacology studied in preparation for ACLS and ventilator management. Microbiology in relation to equipment processing, pulmonary rehabilitation, respiratory care in alternative settings, patient education, and health promotion.

### **AHRC 150 - Respiratory Care Lab I. 1 Credit.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into the Respiratory Care program. Basic clinical competencies taught in AHRC 131 are studied in a laboratory setting. Peer and instructor review of competencies included. Students earn their BLS certification.

### **AHRC 191 - Special Topics. 1-6 Credits.**

Offered at Missoula College. Prereq., acceptance into the Respiratory Care program. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHRC 231 - Respiratory Critical Care. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into the Respiratory Care program. Continuation of AHRC 131. Physiology, indication, contraindications, and application of mechanical ventilation. Emphasis on patient assessment, monitoring, stabilization and weaning during assisted pressure breathing. Analysis of the various modes of ventilation, including optimizing the patient-ventilator interface in the adult through various advanced airway techniques.

**AHRC 232 - Respiratory Pathology & Disease. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Special lectures in medicine and disease as related to the cardiopulmonary system. Emphasis on recognition of signs and symptoms of disease and implications for treatment through the study of selected case studies.

**AHRC 235 - Cardiopulmonary Anatomy & Physiology. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Principles of physiologic chemistry are introduced and applied to the macro and micro anatomy of the cardiopulmonary system with a focus on structure and function. Application made to pathology and assessment of patients receiving mechanical ventilation.

**AHRC 243 - Perinatal & Pediatric Respiratory Care. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Study of perinatal and pediatric respiratory care with emphasis on assessment, resuscitation and mechanical ventilation of the neonate and pediatric patient. The theory of Neonatal Resuscitations (NRP) will be presented. Neonatal and pediatric diseases will be studied.

**AHRC 250 - Respiratory Care Lab II. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. A continuation of AHRC 150 with emphasis on adult critical care. Clinical competencies taught in AHRC 231 and AHRC 235 are studied in a laboratory setting. Peer and instructor review of competencies included.

**AHRC 252 - Respiratory Care Review. 2 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. A review of respiratory care in preparation for credentialing exams. Students must take an Entry Level Self-Assessment Exam, a Written Registry Self-Assessment Exam, and a Clinical Simulation Self-Assessment Exam.

**AHRC 255 - Clinical Experience I. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Emphasis on the student directly performing basic clinical skills in a patient care setting to include hospitals, home care, and pulmonary function laboratories. Students also participate in physician rounds.

**AHRC 260 - Respiratory Care Lab III. 1 Credit.**

Offered summer. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Students study principles and theory of advanced life support. Peer and instructor review are included. Students will be Advanced Cardiac Life Support (ACLS) and Pediatric Advance Life Support (PALS) certified at the end of this class.

**AHRC 265 - Clinical Experience II. 5 Credits.**

Offered summer. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Continuation of clinical skills learned in AHRC 255. Introduction to adult critical care along with sleep and cardiac diagnostics. Students also participate in physician rounds.

**AHRC 270 - Respiratory Care Lab IV. 1 Credit.**

## University Of Montana

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Emphasis on neonatal and pediatric critical care. Clinical competencies introduced in RES 241 are studied. Peer and instructor review of competencies are included.

### **AHRC 275 - Clinical Experience III. 6 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into Respiratory Care program. Continuation of AHRC 265 with critical care of the adult. Neonatal and pediatric critical care experiences are emphasized. Students also participate in physician rounds.

## Allied Health: Health Sciences (AHHS)

### **AHHS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **AHHS 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHHS 300 - PreMedical Sciences 101 Honors: The Science of Health Professions Success. 2 Credits.**

This course is designed to aid in student retention in the Health Professions preparation paradigm. By the end of the course students should be able to chose an appropriate major for their chosen post-graduation school, be aware of every member of today's health care team and know their roles and be aware of the steps necessary to prepare for entry into a health professions school such as medical school, dental school, PA, veterinary (interview prep, acquiring letters of recommendation, entrance exam prep, personal statement writing, financing, etc.). They will also be exposed to end-of-life ethics, foreign medical service, and types of volunteering, job shadowing necessary for a future in the health professions. The enrollment max is 30 students. This course will be offered Fall and Spring semesters. It is typically taught at the Mountain campus in Skaggs 169 or Skaggs 117 in a face-to-face manner. The grade policy is standard letter grades.

### **AHHS 325 - Introduction to Gerontology. 3 Credits.**

Offered spring. Prereq., junior standing or consent of instr. An interdisciplinary discussion of the health and social issues of older persons, utilizing didactic presentations, clinical demonstrations, and curricular modules.

### **AHHS 327 - MGS Meeting. 1 Credit.**

(R-3) Offered spring. Attendance and participation in the Montana Gerontology Society meeting held annually in April.

### **AHHS 389 - Recent Advances in Clinical Medicine. 1 Credit.**

(R-3) Offered spring. Prereq., junior or senior standing. Weekly presentations throughout the semester by local clinical medical practitioners describing in non-technical terms recent advances in their specialities.

### **AHHS 390 - Research. 1-4 Credits.**

(R-8) Offered autumn and spring. Prereq., consent of instr. Traditional or CR/NCR grading determined by instructor.

### **AHHS 391 - Special topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHHS 394 - Medical Preparation. 2 Credits.**

## University Of Montana

Offered autumn. Admission by application, sophomores, juniors, and seniors only. This is a survey course designed for students considering a career in the health care field, geared towards students considering becoming a medical provider (MD, DO, NP, PA).

### **AHHS 395 - Geriatric Practicum. 1-3 Credits.**

(R-3) Offered spring. Prereq., HS 325. Service learning experience in geriatrics in a setting compatible with the student's major and interests.

### **AHHS 418 - Geriatric Health Care. 1 Credit.**

(R-4) Offered spring semester. Course is offered on the Mountain Campus using blended delivery. Geriatric topics presented as a webinar by the University of Washington health professions faculty via the UW Interactive Virtual Classroom. Course is graded on attendance. Faculty are available for questions at end of presentation.

### **AHHS 420 - Geriatric Health Issues. 3 Credits.**

Prereq., Anatomy & physiology. A review of normal aspects of aging, common health problems associated with aging, and common pharmacological and non-pharmacological treatments of these problems in older persons.

### **AHHS 430 - Health Aspects of Aging. 3 Credits.**

Offered spring. Overview of the health aspects of aging in the United States including biological theories of aging, normal physiological changes associated with aging systems, common pathological problems associated with aging, cultural and ethnic differences in the health of elders, health promotion and healthy aging, and the health care continuum of care for older persons.

### **AHHS 450 - Interprofessional Collaborative Practice Skills. 1 Credit.**

Offered autumn, Mountain campus, face-to-face. The primary goals of this seminar course are to bring students from various health care programs into one classroom to learn about interprofessional collaborative practice concepts and further develop skills needed to work as interdisciplinary teams in various health care settings. Students will be engaged through small and large group discussions/activities, relevant reading assignments, and short topic presentations to develop core competencies for IP practice. Available CR/NCR only. Level: Undergraduate and Graduate

### **AHHS 470 - Friday Morning Medical Conference. 1 Credit.**

(R-9) Offered autumn and spring. Face-to-face course, webinar presentation with in-class discussion. This course is a weekly presentation provided locally at Providence Saint Patrick Hospital and streamed live to the Skaggs building 174. A variety of relevant health care topics are presented by local, regional and national speakers. FMMC is sponsored and supported by Western Montana AHEC. Students attending will learn about a variety of concepts, medical approaches, and health-care related issues impacting health care practitioners in a variety of settings. A facilitated in-class activity or discussion will wrap up the session each week. The material presented each semester is different, so students can take the course more than once. Offered fall and spring semesters. CR/NCR grading only.

### **AHHS 484 - Culinary Medicine. 3 Credits.**



## University Of Montana

Offered intermittently. Provides an introduction to Culinary Medicine and builds context for the essential role that dietary choices play in individual and societal health and wellness. Level: Undergraduate and Graduate

### **AHHS 490 - Research. 1-4 Credits.**

(R-8) Offered autumn and spring. Prereq., consent of instr. Traditional or CR/NCR grading determined by instructor.

### **AHHS 491 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHHS 550 - Interprofessional Collaborative Practice Skills. 1 Credit.**

Offered autumn, Mountain campus, face-to-face. The primary goals of this seminar course are to bring students from various health care programs into one classroom to learn about interprofessional collaborative practice concepts and further develop skills needed to work as interdisciplinary teams in various health care settings. Students will be engaged through small and large group discussions/activities, relevant reading assignments, and short topic presentations to develop core competencies for IP practice. Students enrolled for graduate credit will complete a paper on an IP topic. Traditional letter grade only. Level: Graduate

### **AHHS 582 - Implementing Value Based System Change in Rehabilitation. 1 Credit.**

Offered every semester. Prereq., enrolled in the Rehabilitation Business Administration Certificate. Enhance the learner's appreciation of the management, data, and system skills needed to successfully innovate and implement necessary value based practice changes to compete in the changing rehabilitation healthcare landscape. Level: Graduate

### **AHHS 584 - Leadership to Develop Innovative Clinical Practice for Value Based Care. 2 Credits.**

This course will explore the drivers of health care reform, the key strategies to implement value based care. The required leadership and organizational characteristics to support innovations and transformative health care. Level: Graduate

### **AHHS 590 - Research. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. CR/NCR grading.

### **AHHS 591 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **AHHS 592 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of advisor and instr. Course material appropriate to the needs and objectives of the individual student.

### **AHHS 599 - System Skills to Thrive in a Changing Health Care Environment - Capstone Project. 4 Credits.**

## University Of Montana

This course will culminate in a capstone project describing the concept of system skills (ie., intrinsic interest in data, the ability to devise solutions to problems identified by the data; and understanding of how to implement practice innovations on a large scale) with relevance to physical therapy practice. The course has three components 1) the importance of measurement and the resultant systems data, 2) the concept of `positive deviants? and provides case examples of innovators who are using systems data to solve clinical challenges, and 3) performance of a capstone project by the student related to their clinical issue. Level: Graduate

## Allied Health: Athletic Training (AHAT)

### **AHAT 210 - Prevention and Care Athletic Injuries. 2 Credits.**

Coreq., AHAT 213. Development of knowledge of prevention, assessment, treatment, rehabilitation, emergency care of athletic injuries.

### **AHAT 213 - Prevention and Care Athletic Injuries Lab. 1 Credit.**

Coreq., AHAT 210. Development of practical skills in prevention, assessment, treatment, rehabilitation, and emergency care of athletic injuries.

### **AHAT 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of advisor and instr. Course material appropriate to the needs and objectives of the individual student.

### **AHAT 324 - Assessment of the Extremities. 2 Credits.**

Coreq., AHAT 325. The study and practice of techniques used when assessing athletic injuries to the upper and lower extremities, including the spine.

### **AHAT 325 - Assessment of the Extremities Lab. 1 Credit.**

Coreq., AHAT 324. The study and practice of techniques used when assessing athletic injuries to upper and lower extremities including the spine.

### **AHAT 342 - Therapeutic Interventions. 2 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course, coreq., AHAT 343. Theories and application methods of interventions such as therapeutic modalities and exercise for athletic injuries. Substantial reading and writing component.

Gen Ed Attributes: Writing Course-Advanced

### **AHAT 343 - Therapeutic Interventions Lab. 1 Credit.**

Coreq., AHAT 342. Laboratory sessions examining theories and application methods of interventions such as therapeutic modalities and exercise for athletic injuries.

Gen Ed Attributes: Writing Course-Advanced

### **AHAT 479 - Topics in Sports Medicine. 3 Credits.**

Prereq., Junior standing or higher. The etiology and management of sports related injuries/illnesses. Includes: therapeutic use of drugs, pre-participation screening techniques, ergogenic aids, the aging athlete, the sports medicine team concept and current medical treatment of sports injuries.

### **AHAT 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student.

### **AHAT 492 - Independent Study. 1-3 Credits.**

## University Of Montana

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **AHAT 498 - Internship. 2-6 Credits.**

(R-6) Prereq. all INPH concentrations minimum junior standing and ECP 120/121 (or equivalent). Prereqs per concentration. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must take KIN 410 and COA 405 as corequisites. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must take KIN 460/483/484 as corequisites. Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 16 credits their internship semester.

## Anthropology (ANTY)

### **ANTY 101H - Anthropology & the Human Experience. 3 Credits.**

Offered autumn and spring. Offered intermittently in summer. A survey of anthropology which introduces the fundamental concepts, methods and perspectives of the field. The description and analysis of human culture, its growth and change. The nature and functions of social institutions.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 102H - Intro to South & S. East Asia. 3 Credits.**

Offered intermittently. An introduction to South and Southeast Asian regions, cultures, societies, and histories, with particular emphasis on artistic, religious and literary traditions from prehistory to the present. Countries include India, Indonesia, Vietnam, Thailand, Sri Lanka, Pakistan and Nepal. An overview approach with different materials and emphases.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 103H - Intro Latin American Studies. 3 Credits.**

Offered intermittently. Multidisciplinary survey and introduction to Latin America from pre- Columbian times to the present.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 104 - Ancient Migrations. 3 Credits.**

Offered spring. An exploration of migrations in human prehistory and history as known from DNA studies, the archaeological record, historical linguistics, the human fossil record and history. How these migrations have impacted the culture, institutions, and biology of contemporary societies and populations.

### **ANTY 122S - Race and Minorities. 3 Credits.**

Offered autumn. Analysis of the development and concept of race as a social category and the processes of cultural change within and between ethnic groups.

Gen Ed Attributes: Social Sciences Course (S), Democracy and Citizenship (Y)

### **ANTY 126 - Anthropology and Global Health. 3 Credits.**

Offered intermittently, Mountain Campus, Face to face. This course will examine a set of global health problems rooted in rapidly changing social structures, cultural beliefs and practices, and environmental and biological realities that transcend geopolitical and other imagined boundaries. Students will explore case studies (addressing Ebola, tuberculosis, mental illness, and other topics) and a multidisciplinary literature (including anthropology, epidemiology, history, and biomedicine) centering on how biosocial perspectives might provide a foundation to improve health and well-being on a global level.

### **ANTY 133X - Food and Culture. 3 Credits.**

Offered spring. Examination of the ways culture shapes the satisfaction of a biological need; food production, preparation, choices, customs, taste, taboos, beverages, spices and food distribution around the globe.

## University Of Montana

Gen Ed Attributes: Cultural Intl Diversity (X)

### **ANTY 141H - The Silk Road. 3 Credits.**

Offered autumn and spring. Introduction to the study of the human communities, cultures, and economies in Central and Southwest Asia along the ancient four thousand mile-long Silk Road.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 150X - Archaeology of Yellowstone: 11,000 Years of Native Americans in Yellowstone National Park. 3 Credits.**

Offered autumn. Introduces students to the Native American prehistory and history of Yellowstone National Park, from 11,000 years ago to the present. The focus is on archaeological sites in the various areas of the park, including lakes, mountains, obsidian sources, rivers, and geyser basins.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **ANTY 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ANTY 191E - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Gen Ed Attributes: Ethical & Human Values Course

### **ANTY 192 - Independent Study. 1-6 Credits.**

### **ANTY 193 - Study Abroad. 1-12 Credits.**

### **ANTY 198 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, and 498) may count toward graduation.

### **ANTY 210N - Intro to Physical Anthropology. 3 Credits.**

Offered autumn and spring. An introduction to human evolutionary biology including processes of evolution, primate studies, hominid paleontology, and human variation.

Gen Ed Attributes: Natural Science Course (N)

### **ANTY 213N - Physical Anthropology Lab. 1 Credit.**

Prereq., or coreq., ANTY 210N. Offered autumn and spring. This lab course allows students to more deeply explore the concepts and materials covered in Introduction to Physical Anthropology. Students will engage in lab based activities involving human genetics and processes of evolution, biology and behavior of non-human primates, human evolution, and modern human adaptation and variation. Gen Ed Attributes: Natural Science Lab Course (N)

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Gen Ed Attributes: Natural Science Course (N)

### **ANTY 220S - Culture & Society. 3 Credits.**

Offered autumn and spring. Study of social organization of non-western societies; emphasis on variations in ecology, social structure, economic, political and religious beliefs and practices.

Gen Ed Attributes: Social Sciences Course (S), Cultural Intl Diversity (X)

### **ANTY 241H - Central Asian Culture and Civilization. 3 Credits.**

Offered autumn even numbered years. Introduction to Central Asia's history, culture and ways of thinking. Focus on the political and social organization of Central Asia and cultural changes as expressed in art and interactions with China, India and the Middle East.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 250S - Intro to Archaeology. 3 Credits.**

Offered autumn and spring. What archaeologists do and how they reconstruct past human cultures. Methodological and theoretical approaches to understanding and explaining past human societies.

Gen Ed Attributes: Social Sciences Course (S)

### **ANTY 251 - Foundations of Civilization. 3 Credits.**

Offered intermittently. Focus on the worldwide evolution of human society from Stone Age hunter-gatherers to the beginnings of modern civilization. Approached through the colorful and exciting world of archaeologists and the sites they excavate.

### **ANTY 254X - Archaeological Wonders of the World. 3 Credits.**

Offered spring even numbered years. Prereq., WRIT 101 (or higher) or equivalent. This course highlights the classical civilizations of the ancient world, fields such as Egyptology and Classical Archaeology, and the major archaeological discoveries which are associated with them.

Gen Ed Attributes: Cultural Intl Diversity (X), Writing Course-Intermediate,

### **ANTY 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings relating to current problems or new developments in the discipline.

### **ANTY 310 - Human Variation. 3 Credits.**

Offered autumn. Prereq., ANTY 210N, WRIT 101 (or higher) or equivalent or consent of instr. Introduction to human biological variation, and to the methods and theories that are used to explain the distribution of variable features.

Gen Ed Attributes: Writing Course-Intermediate

### **ANTY 312 - Human Evolution. 3 Credits.**

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Offered autumn, odd-numbered years. Prereq., ANTY 210N. An exploration of the fossil and archaeological records of the evolution of human beings, and of current methods and theories used in interpreting these data.

### **ANTY 314 - Principles of Forensic Anthropology. 3 Credits.**

Offered autumn. Prereq., ANTY 210N. A study of techniques for recovering skeletal material, identifying and interpreting human skeletal remains, keeping records, interacting with the law enforcement system and documenting human rights abuses.

### **ANTY 318 - Casting & Facial Approximation. 3 Credits.**

Offered intermittently. Prereq., ANTY 314 and consent of instr. An exploration of techniques for conservation and replication of skeletal elements, facial reconstruction, and other techniques for identification of individuals from their skeletal remains.

### **ANTY 323X - Native Peoples of Montana. 3 Credits.**

Offered spring. The history and culture of the Indian tribes in Montana.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **ANTY 326E - Indigenous Peoples & the Ethics of Development. 3 Credits.**

Offered spring odd-numbered years. This class will examine the impact of global development on tribal and Indigenous peoples. Discussion topics will include ethical issues, land, health, employment, and cultural change caused by global development as well as explore how and why Indigenous societies resist or adapt to imposed changes.

Gen Ed Attributes: Ethical & Human Values Course

### **ANTY 330X - Peoples and Cultures of World. 3 Credits.**

(R-9) Offered autumn and spring. Study of the peoples of various geographic regions and their cultures.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **ANTY 333 - Culture and Population. 3 Credits.**

Offered intermittently. The relationship between population processes and culture to the human condition; survey data, methodologies, theories of demographic and culture change.

### **ANTY 336 - Myth, Ritual and Religion. 3 Credits.**

Offered autumn odd-numbered years. Theories and practices concerning supernatural phenomena, and the comparative study of world religions and cosmological traditions of indigenous peoples throughout the world.

### **ANTY 347 - Central Asia and Its Neighbors. 3 Credits.**

Offered intermittently. Analysis of the human communities and cultures of Central and Southwest Asia, with particular emphasis on the importance of relationships with neighboring countries and civilizations since ancient times.

### **ANTY 349 - Social Change. 3 Credits.**



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Offered intermittently. Study of the processes of social change, modernization and development.

### **ANTY 351H - Archaeology of North America. 3 Credits.**

Offered autumn. The origins, backgrounds and development of Pre-Columbian American peoples and cultures.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ANTY 352X - Archaeology of Montana. 3 Credits.**

Offered spring. The origins, distributions and development of aboriginal cultures in Montana and surrounding regions.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **ANTY 353 - PaleoIndian Archaeology. 3 Credits.**

Offered spring or winter, even-numbered years. Examines archaeological, linguistic, biological and skeletal data to determine from where and when Native Americans arrived in North America. Examines archaeological sites from such diverse places as Montana, Siberia, Virginia, and Chile to answer the most intriguing question in contemporary American archaeology today: how, when and from where did people first arrive in the Americas?

### **ANTY 354H - Mesoamerican Prehistory. 3 Credits.**

Offered spring odd-numbered years. The development of civilization and prehistoric states in the New World. Prehistoric lifeways and the effects of European contact on these cultures.

Gen Ed Attributes: Historical Studies

### **ANTY 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ANTY 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., 9 credits in anthropology; consent of faculty supervisor and cooperative education officer. Practical application of classroom learning through internship in a number of areas such as museology, cultural resource management, and forensics. A maximum of 6 credits of Internship (198, 298, 398, and 498) may count toward graduation.

### **ANTY 400 - History of Anthropology. 3 Credits.**

Offered intermittently. Prereq., majors and minors in Anthropology. The development of theory and method in cultural anthropology to the present. Various archaeological, ethnological and socio-psychological theories in the light of historical anthropology.

### **ANTY 401 - Anthropological Data Analysis. 3 Credits.**

Offered autumn. Prereq., M 104, M 105, M 115, M 121, M 122, M 135, M 151 or consent of instr. An analysis of the foundations of anthropological scaling and measurement.

### **ANTY 402 - Quantitative Ethnographic Field Methods. 3 Credits.**

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Offered autumn even numbered years. Prereq., WRIT 101 or equivalent, and one intermediate writing course. This course is designed to enhance student understanding of field methods that generate quantitative data describing human behavior. The toolkit of a student completing this course will include knowledge of basic methods that will get you from observing behavior to discussing your research and findings in a professional manner in oral or written formats.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 403 - Public Anthropology. 3 Credits.**

Offered spring odd-numbered years. Prereq., ANTY 101H or 220S, or consent of instr. Focus on the public accountability, transparency and the value and effects of anthropological research for local, national, and transnational communities. Level: Undergraduate

### **ANTY 404 - Anthropological Museology. 3 Credits.**

Offered spring even-numbered years. Introduction to anthropological museums, museum work and museum theory.

### **ANTY 408 - Advanced Anthropological Statistics. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, and one intermediate writing course, and ANTY 401 or consent of inst. Focus on techniques used for microcomputer-based data management and multivariate analysis.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 409 - Preceptorship in Anthropology. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., ANTY 210N, 220S, 250S and consent of instr. Assisting a faculty member by tutoring, grading objective exams, conducting review sessions, and carrying out other class-related responsibilities. Open to juniors, senior, and graduate students with consent of the faculty member with whom they serve. Proposals must be approved by department chair.

### **ANTY 412 - Osteology. 4 Credits.**

Offered autumn. Prereq., ANTY 314 and consent of instr. A detailed examination of the human skeleton with an emphasis on identifying individual bones and their structures. Specifically extended to fragmentary skeletal elements. Direct hands-on experience required.

### **ANTY 413 - Forensic and Mortuary Archaeology. 3 Credits.**

Offered spring. Prereq., ANTY 314 and consent of instr. Practical approaches to locating, documenting and recovering human skeletal remains, including surface scatters and burials. Emphasis on interpretations of evidence for recovery scene formation and mortuary behavior.

### **ANTY 415 - Emergence of Modern Humans. 3 Credits.**

Offered spring, odd-numbered years. Prereq., ANTY 210N. An exploration of the emergence of "modern" humans and their relationships with Neanderthals. Exploration of what it means to be "a modern human" through an examination of human evolutionary history.

### **ANTY 416 - Dental Anthropology. 3 Credits.**

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Offered intermittently. Prereq., ANTY 210N. The use of information from teeth in investigating evolutionary trends, the relationships between human groups, subsistence change, and culture change.

### **ANTY 418 - Evolution and Genetic Variation in Human Populations. 3 Credits.**

Offered spring, even-numbered years. Prereq. ANTY 310. Human genetic variation examined from a molecular perspective. Emphasis on the role of infectious disease and other factors as a selective factor in human evolution and exploration of the implications of these associations for human genetic variation.

### **ANTY 422 - Mind, Culture, and Society. 3 Credits.**

Offered intermittently. The study of socialization, personality, cognition, and mental health cross-culturally.

### **ANTY 423 - Culture and Identity. 3 Credits.**

Offered intermittently. The comparative study of identity formation along and across racial, ethnic, and ethno-national lines. Emphasis on issues of ethnogenesis, cultural resistance, transformation, domination, colonialism as well as sharing to understand both the cultural commonalities and differences in identity formation.

### **ANTY 426 - Culture, Health, and Healing. 3 Credits.**

Offered autumn. Cross-cultural comparisons of theories and concepts and health and illness. Examination of the impact of these concepts upon health practices and treatment of disease around the world.

### **ANTY 427 - Anthropology of Gender. 3 Credits.**

Offered spring, odd-numbered years. Comparative study of the history and significance of gender in social life.

### **ANTY 430 - Social Anthropology. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Seminar style senior capstone course for cultural anthropology students. This course focuses on bringing theory and methods together in written and visual ethnography.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 431 - Ethnographic Field Methods. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, and one intermediate writing course and ANTY 220S or consent of instr. Introduction to socio-cultural anthropological methods including participant observation, interviewing and narrative techniques and analysis of qualitative data.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 433 - Indigenous Global Health & Healing. 3 Credits.**

Offered intermittently. Examination of traditional and contemporary uses of medicine in Native American societies. Issues covered will include current health conditions of American Indians, and the relationship from a cultural perspective on health, healing and medicine.

### **ANTY 435 - Drugs, Culture, and Society. 3 Credits.**

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Offered intermittently. Drug use in a cross-cultural perspective. The role of drugs in cultural expression and social interaction. Examination of the prehistory of drug use, drug use in traditional non-Western and Western societies, and drug use in the context of global sociocultural change.

### **ANTY 440 - Contemporary Issues of South and Southeast Asia. 3 Credits.**

Offered intermittently. Prereq., ANTY 102H. An examination of the major issues that affect the contemporary experience of South and Southeast Asians.

### **ANTY 442 - Cities and Landscapes of Central Asia. 3 Credits.**

Offered intermittently. Analysis of the main centers of civilization and culture, rich sites and monuments of Central Asia and Southwest Asia since ancient times.

### **ANTY 444 - Artistic Traditions of Central Asia. 3 Credits.**

Offered intermittently. Analysis of the study of human artistic creativity and scientific innovations of various cultures in Central and Southwest Asia since ancient times.

### **ANTY 450 - Archaeological Theory. 3 Credits.**

Offered autumn odd-numbered years. Prereq., WRIT 101 or equivalent, and one intermediate writing course and ANTY 250S. Historical trends and current major theories and methods in archaeology. Co-convenes with ANTY 550.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 451 - Cultural Resource Management. 3 Credits.**

Offered autumn, even-numbered years. Introduction to the laws and practice of cultural resource/heritage property management. Focus on the management of archaeological sites, historic structures, and traditional cultural places due to federal laws. Emphasis is on laying foundation of CRM practices for students interested in pursuing it as a potential career.

### **ANTY 452 - GIS in Archaeology. 3 Credits.**

Offered intermittently. Prereq., ANTY 250s. Anthropological and archaeological data acquisition, management, and analysis using Geographic Information Systems (GIS) tools and techniques.

### **ANTY 454 - Lithic Technology. 3 Credits.**

Offered autumn odd-numbered years. Analysis of stone artifacts and debitage.

### **ANTY 455 - Artifact Analysis. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course and ANTY 250S or consent of instr. Laboratory approaches and techniques for analyzing material culture from technological, stylistic, and chronological perspectives.

Gen Ed Attributes: Writing Course-Advanced

### **ANTY 456 - Historical Archaeology. 3 Credits.**

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Offered spring. Prereq., ANTY 250S or consent of instr. Understanding and interpreting the past through historical archaeological remains, methods, and theories. Focuses on historical archaeological sites and topics from the American West, but also examines the field's global perspective.

### **ANTY 458 - Archaeology of Hunter-Gatherers. 3 Credits.**

Offered autumn even-numbered years. Introduction to the archaeological study of hunter-gatherer societies. Primary emphasis on archaeological method and theory.

### **ANTY 459 - Archaeology of the Arctic and Subarctic. 3 Credits.**

Offered spring even-numbered years. Introduction to the study of Arctic and Subarctic archaeology emphasizing the Pleistocene and Holocene prehistory of North America and eastern Siberia. Understanding of methodological problems associated with archaeology in a northern context, the evolution of Inuit, Eskimo, Aleut and Athapaskan cultures, and hunter-gatherer adaptations to northern interior and coastal environments.

### **ANTY 465 - Archaeology of the Southwest United States. 3 Credits.**

Offered intermittently. The development of the prehistoric communities in the southwestern United States from ancient times to the dawn of history in the area.

### **ANTY 466 - Archaeological Survey. 1-12 Credits.**

(R-12) Prereq., ANTY 250S. Offered autumn. A field course in Montana archaeology.

### **ANTY 467 - Archaeological Field School. 3-12 Credits.**

(R-12) Offered summer and/or winter. Prereq., ANTY 250S and consent of instructor. Provides students with a well-rounded experience in archaeological field methods. Field schools will typically occur at archaeological site locations away from campus. During the archaeological field experience, students may learn methods of excavation, survey, research, and analysis to facilitate their transition to careers as professional archaeologists.

### **ANTY 476 - Methods for Native Languages. 3 Credits.**

(R-6) Offered spring. In an effort to highlight promising methodologies that will advance the success of Native language acquisition and instruction, students will be exposed to an innovative methodology while being instructed in an Indigenous language.

### **ANTY 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ANTY 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **ANTY 494 - Seminar/Workshop. 3 Credits.**

Offered spring even-numbered years. Advanced analysis of historical and contemporary issues involving human communities, cultures, and economies of a particular region, and that region's role in the world.

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### **ANTY 495 - Field Experience. 1-12 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Organized field experience in anthropology.

### **ANTY 498 - Internship. 1-6 Credits.**

(R-6) Practical application of classroom learning through internship in a number of areas such as museology, cultural resource management and forensics.

### **ANTY 500 - Contemporary Anthropological Thought. 3 Credits.**

Offered intermittently. Prereq., graduate standing or consent of instructor. A review of major contributions to current anthropological theory, with an emphasis on the application of theory to anthropological problems. Significant advances in general theory, symbolic anthropology, critical theory, cultural studies, and postmodernism. Level: Graduate

### **ANTY 501 - Historical Anthropology. 3 Credits.**

Offered intermittently. The location, use, and value of written records in anthropological research. Level: Graduate

### **ANTY 510 - Seminar on Human Variation & Evolution. 3 Credits.**

(R-6) Offered autumn. Prereq., ANTY 515. Various topics related to genetic evidence of human biological evolution, morphological and genetic diversity of modern humans, and problems of "race". Level: Graduate

### **ANTY 512 - Advanced Forensic Anthropology. 3 Credits.**

(R-6) Offered spring. Prereq., ANTY 515 and consent of instr. Review of traditional methods and exploration of new methods of skeletal analysis, as applied to cases from the forensic collection. Level: Graduate

### **ANTY 513 - Seminar in Bioarchaeology & Skeletal Biology. 3 Credits.**

(R-6) Offered spring. Prereq., ANTY 515 or consent of instructor. Theoretical and methodological approaches to the analysis of human skeletal remains derived from archaeological contexts. Demography, health and disease, diet and nutrition, growth, activity patterns, and measures of biological relatedness are interpreted within a biocultural framework. Level: Graduate

### **ANTY 514 - Seminar in Paleoanthropology & Evolutionary Analysis. 3 Credits.**

(R-6) Offered intermittently. Prereq., ANTY 515 or consent of instructor. Exploration of selected aspects of the human fossil, archaeological, & genetic records and the theories and methods of evolutionary analysis used to analyze them. Level: Graduate

### **ANTY 515 - Theory & Methods in Bioanthropology. 3 Credits.**

Offered autumn. A detailed review of the body of theory that is foundational for the study of human evolution, human variation, bioarchaeology, forensic anthropology, and primatology, along with a consideration of major methods used to analyze data in these fields. Level: Graduate

### **ANTY 520 - Seminar in Contemporary Ethnography. 3 Credits.**

Offered intermittently. A review and discussion of current ethnographic research. Level: Graduate

### **ANTY 521 - Applied Anthropology. 3 Credits.**

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Offered intermittently. Study of ways in which anthropological skills may be used in non-academic fields. Level: Graduate

### **ANTY 522 - Medical Anthropology. 3 Credits.**

Offered intermittently. An examination of selected issues and trends in contemporary theory and methodology within medical anthropology. Seminar assignments and discussions focus on understanding the application of anthropological concepts and methods in medical settings and are organized around several topics, including cultural conceptualizations of health, illness and risk; global health; the social and cultural construction of illness; drug and pharmaceutical use; and mental health in cultural context. Level: Graduate

### **ANTY 550 - Seminar in Archaeology. 3 Credits.**

Offered autumn odd-numbered years. A review and discussion of current research. Topics vary. Co-convenes with ANTY 450. Level: Graduate

### **ANTY 551 - Seminar Historical Archaeology. 3 Credits.**

Offered autumn odd-numbered years. An exploration of theories, methods, and literature in historical archaeology. Level: Graduate

### **ANTY 553 - Evolutionary Archaeology. 3 Credits.**

Offered autumn even-numbered years. Examination of method and theory in Darwinian evolutionary archaeology. Seminar assignments and discussions focus on human behavioral ecology, cultural transmission, and macroevolution. Level: Graduate

### **ANTY 593 - Professional Project. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **ANTY 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **ANTY 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **ANTY 597 - Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student. Level: Graduate

### **ANTY 598 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., graduate standing and consent of faculty supervisor. Practical application of classroom learning through internship in a number of areas such as museology, cultural resource management and forensics. Written reports are required. Level: Graduate

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### **ANTY 599 - Thesis. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

### **ANTY 600 - Issues in Cultural Heritage. 3 Credits.**

Offered autumn. Prereq., consent of instr. Doctoral dissertation research activities. A review of the range of topics that fall under the umbrella of cultural heritage and a review of theory and practice in one or more of these topics. Level: Graduate

### **ANTY 601 - Research Design & Proposal Preparation. 3 Credits.**

Offered spring. Prereq., graduate standing. Seminar in the development of anthropological research designs and proposals. Level: Graduate

### **ANTY 602 - Cultural Heritage Policy & Practice. 3 Credits.**

Offered spring odd-numbered years. Prereq., graduate standing. Exploration of critical issues in cultural heritage policy emphasizing the regulatory basis for federal CRM, public anthropology, and indigenous people's issues. Hands-on training in the design and production of federal planning documents. Level: Graduate

### **ANTY 694 - Seminar in Cultural Heritage. 1-6 Credits.**

(R-6) Offered intermittently. A review and discussion of current research. Topics vary. Level: Graduate

### **ANTY 697 - Advanced Research. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Independent research projects, other than dissertation. Level: Graduate

### **ANTY 699 - Dissertation. 1-10 Credits.**

(R-10) Offered every term. Doctoral dissertation research activities. Level: Graduate



## Applied Arts and Sciences (AASC) < University of Montana

### Applied Arts and Sciences (AASC)

#### **AASC 100 - Intro to University Experience. 3 Credits.**

Offered at Missoula College. This course is designed to help new students make a successful transition to college and acquire the skills needed to become competent and successful in higher education. Topics include an introduction to campus resources and academic policies; motivation and time management; study skills and learning strategies; critical thinking and problem solving; ethics, diversity and collaboration; information literacy and research. The course culminates with a semester capstone project. Elective credit only. Credit not allowed for both AASC 100 and AASC 101.

#### **AASC 101 - Study & Learning Strategy. 2 Credits.**

Offered at Missoula College. This course facilitates the development of skills needed to become competent and successful in higher education. Topics include management of classroom performance, time, and money; memory, listening and note-taking; reading and test-taking strategies; critical thinking and problem-solving; information literacy and research; ethics and diversity; stress management and healthy choices. Elective credit only. Credit not allowed for both AASC 100 and AASC 101.

#### **AASC 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **AASC 294 - Seminar. 2 Credits.**

Offered every semester at Missoula College, open to Missoula College or Mountain Campus students who have completed at least 1 semester in the course for which they will tutor. Prereq., consent of instructor. Meets in class 1 hour each week (online course supplement), with three hours of tutoring per week in supervised setting required after week 3. Not repeatable.

## Arabic (ARAB)

### **ARAB 101 - Elementary Modern Standard Arabic I. 4 Credits.**

Offered autumn. Elementary Modern Standard Arabic I brings students the opportunity to learn Arabic via a communicative approach, where the emphasis is placed on the functional use of the Arabic Language. Active skills are listening, speaking, reading, and writing, plus basic cultural study.

### **ARAB 102 - Elementary Modern Standard Arabic II. 4 Credits.**

Offered spring. Elementary Modern Standard Arabic II is a continuation of ARAB 101, in that it helps students learn Arabic via a communicative approach, where the emphasis is placed on the functional use of the Arabic Language. Active skills are listening, speaking, reading, and writing, plus basic cultural study.

Gen Ed Attributes: Foreign Language Requirement

### **ARAB 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ARAB 201 - Intermediate Modern Standard Arabic I. 4 Credits.**

Offered autumn. Prereq., ARAB 102 or equiv. Course is designed to help students further develop their language skills (listening, speaking, reading, and writing) and learn more about the Arab culture and advanced grammar rules beyond the elementary level. The target proficiency level is Intermediate-Low/Mid (based on proficiency guidelines from the American Council on the Teaching of Foreign Languages).

Gen Ed Attributes: Foreign Language Requirement

### **ARAB 202 - Intermediate Modern Standard Arabic II. 4 Credits.**

Offered spring. Prereq., ARAB 201 or equiv. Course is a continuation of ARAB 201, in that it is designed to help students further develop their language skills (listening, speaking, reading, and writing) and learn more about the Arab culture and advanced grammar rules beyond the elementary level. The target proficiency level is Intermediate-Mid (based on proficiency guidelines from the American Council on the Teaching of Foreign Languages).

Gen Ed Attributes: Foreign Language Requirement

### **ARAB 291 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ARAB 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **ARAB 301 - Advanced Modern Standard Arabic I. 3 Credits.**

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Offered autumn. Prereq., ARAB 202 or equiv. Course is designed to help students further develop their language skills (listening, speaking, reading, and writing) and learn more about the Arab culture and advanced grammar rules beyond the intermediate level. The target proficiency level is Intermediate-High (based on proficiency guidelines from the American Council on the Teaching of Foreign Languages)

Gen Ed Attributes: Foreign Language Requirement

### **ARAB 302 - Advanced Modern Standard Arabic II. 3 Credits.**

Offered spring. Prereq., ARAB 301 or equiv. Course is a continuation of ARAB 301, in that it is designed to help students further develop their language skills (listening, speaking, reading, and writing) and learn more about the Arab culture and advanced grammar rules beyond the intermediate level. The target proficiency level is Intermediate-High/Advanced-Low (based on proficiency guidelines from the American Council on the Teaching of Foreign Languages).

Gen Ed Attributes: Foreign Language Requirement

### **ARAB 305 - The Arab World. 3 Credits.**

Offered autumn. Students explore the Arabic-speaking countries through in-depth discussions of their history, geography, peoples, economy, political systems, educational systems, and cultural components, such as music, cuisine, tradition, customs, gender relations, etc. This course is designed for everyone interested in the topic, and no previous knowledge of the Arabic language is required.

### **ARAB 307 - Model Arab League Delegates. 3 Credits.**

Offered spring. Students explore the Arabic speaking countries, from North Africa, the Middle East and the Peninsula through discussions of political, economic, environmental, and social issues affecting the progress of the Arab world and its development. Students will learn parliamentary procedures used in institutions such as the Arab League itself; this mode of discourse will provide the basis for which students debate topics in class in order to better understand the region.

### **ARAB 317 - Model Arab League Staff. 3 Credits.**

Offered spring. As staff members, students will solidify their knowledge of the history, cultures, issues, and politics of the Middle East, as well as parliamentary procedures to a level which enables them to effectively assess, lead, and guide discussion related to their assigned countries and committee topics towards positive ends.

### **ARAB 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ARAB 392 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

## Art (ARTZ)

### **ARTZ 103A - Art for Non-Majors. 3 Credits.**

This course introduces students to visual art and culture from both contemporary and historical perspectives through lectures, readings, writing, and studio projects. It explores visual literacy including terminology, techniques, aesthetics, studio practice, and cultural context.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 105A - Visual Language - Drawing. 3 Credits.**

Offered autumn and spring. Introduction to basic drawing skills and concept integration. Studio practice with research in historical and contemporary approaches.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 106A - Visual Language - 2-D Foundations. 3 Credits.**

Offered autumn and spring. Introduction to the formal elements and principles of design, color theory, and predominant western and non-western historical styles.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 108A - Visual Language - 3-D Foundations. 3 Credits.**

Offered autumn and spring. Introduction to the formal elements and principles of design in 3-D.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 131A - Ceramics for Non-majors. 3 Credits.**

Offered Offered autumn and spring. A general introduction to ceramics for non-art majors. Learn a variety of techniques working with clay and glazes. No Art experience required. Not for B.A, B.F.A majors or art minors.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 191 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings by visiting professors, experimental offerings of new courses, and/or one-time offerings of current topics.

### **ARTZ 211A - Drawing I. 3 Credits.**

Offered intermittently. Prereq., ARTZ 105A. Study of human anatomy through drawing, in-class skills development, homework portfolio, and research in historical and contemporary figuration required.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 214 - Illustration. 3 Credits.**

Offered autumn. This course is an introduction to drawing techniques as they pertain to the commercial illustration industry; emphasis on creative interpretation and disciplined draftsmanship for the visual communication of ideas.

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### **ARTZ 221A - Painting I. 3 Credits.**

Offered autumn and spring. Introduction to acrylic and oil painting. Emphasis on color theory, composition, concept development, and research in historical and contemporary strategies.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 231A - Ceramics I. 3 Credits.**

Offered autumn and spring. Introduction to ceramic techniques. Introduction to clay as a historical and contemporary medium to explore art making. Emphasis on handbuilding and wheel throwing, and concept development including large scale sculpture and functional pottery.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 251A - Sculpture I. 3 Credits.**

Offered autumn and spring. Offered autumn and spring. Introduction to fundamental technical skills and processes used to make sculptural objects. Emphasis on formal concerns, concept development, and new technologies in art.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 271A - Printmaking I. 3 Credits.**

(R-9) Offered autumn and spring. Emphasis on multiples, layering color, and collaboration. Topics may include: relief, intaglio, lithography, screenprinting, artist books, mixed media, or photo-processes. Consideration of historical and contemporary approaches.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 284A - Photo I-Technologies and Processes. 3 Credits.**

Offered autumn and spring. Introduction to photography. Emphasis on exposure, digital camera basics, composition, digital photography processing, and print finishing techniques. Consideration of historical and contemporary approaches.

Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 291 - Special Topics. 1-9 Credits.**

(R-12) Offered intermittently. Experimental offerings by visiting professors, experimental offerings of new courses, and/or one-time offerings of current topics.

### **ARTZ 302A - Foundations of Art Education. 2-3 Credits.**

Offered autumn and spring. Prereq., restricted to majors in Elementary Education, Early Childhood Education, and Studio Art with registration in one section restricted to those formally admitted into the Teacher Education Program. This is a general teaching methods course in visual art education. This course is designed to provide students with a fundamental understanding of the roles, values, classroom pedagogy, and current issues in P-12 visual art education; to investigate child development; to offer an introduction to content standards; and to examine a broad array of art education theories and practices. Students are introduced to available curriculum resources and will engage in academic service learning. Elementary Education majors should register for 2 credits, and Art majors should register for 3 credits.

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Gen Ed Attributes: Expressive Arts Course (A)

### **ARTZ 311 - Drawing II. 3 Credits.**

(R-12) Offered intermittently. Prereq., ARTZ 211A. Focus on integrating content and form in drawings and research in historical and contemporary ideas.

### **ARTZ 321 - Painting II. 3 Credits.**

(R-12) Offered autumn and spring. Continued development of painting skills and concepts with an emphasis on contemporary ideas and approaches. Topics may include: figuration, place, process, abstraction, and other contemporary themes.

### **ARTZ 331 - Ceramics II. 3 Credits.**

(R-12) Offered autumn and spring. More advanced development of ceramic process with emphasis on idea development and individual skill building. Depending on the section handbuilding, wheel throwing and other technique will be taught. Focus on integrating content and form through study of historical and contemporary approaches.

### **ARTZ 335 - Clay and Glaze. 3 Credits.**

Offered autumn. In-depth study of the physical and chemical properties of clays and glazes. Hands-on testing of clay and glaze formulas and introduction to kiln firing.

### **ARTZ 351 - Sculpture II. 3 Credits.**

(R-12) Offered autumn and spring. Continued development of sculptural processes. Emphasis on clear sculptural responses to material-based and topic-based assignments. Consideration of both analog and digital means.

### **ARTZ 370 - Contemporary Printmaking Studio. 3 Credits.**

Offered intermittently. Contemporary Printmaking Studio. Intermediate print course requiring students to establish their own studio set-up for printmaking media. Emphasis on creating multiples, layering color, and breadth of processes. Topics may include: relief, screenprinting, book arts, and outsourced digital fabrication methods.

### **ARTZ 371 - Printmaking II. 3 Credits.**

(R-12) Offered autumn and spring. Continued development of printmaking processes. Emphasis on integration of content. Focus on layering of color, increased scale, styles of format and presentation, and research in historical and contemporary approach topics may include: relief, screenprinting, monotypes, book arts, and outsourced digital fabrication methods.

### **ARTZ 380 - Data Arts. 3 Credits.**

Offered autumn or spring. Data Arts teaches the essential and practical skills necessary to communicate information about data clearly and effectively through graphic and visual design.

### **ARTZ 384 - Photo II-Theory, Criticism, Practice. 3 Credits.**

## University Of Montana

(R-12) Offered autumn and spring. Prereqs., ARTH 250L and prereq. or coreq. ARTZ 284A. Further exploration of photography. Emphasis on traditional film and darkroom-based processes, expansion of technical knowledge in small and medium format cameras, film and chemical process, presentation options, and research in historical and contemporary approaches.

### **ARTZ 385 - The Art of Digital Photography. 3 Credits.**

(R-12) Offered autumn or spring. Prereq. or coreq., ARTH 250L and ARTZ 284A. Further exploration of photography. Emphasis on effective use of color, advanced editing techniques, studio and strobe lighting, varied approaches to format and presentation, introduction to video capture and editing, and research in historical and contemporary approaches.

### **ARTZ 388 - Alternative Process Photography. 3 Credits.**

Offered intermittently. Prereq. or coreq., ARTH 250L and ARTZ 284A. Exploration of historic and alternative photography techniques such as cyanotype, pinhole, and wet-plate. Focus on digital negative, historic optics, and varied approaches to format, presentation, and research in historical and contemporary approaches.

### **ARTZ 389 - Synthesis. 3 Credits.**

Offered spring. Prereq., or coreq., ARTZ 341, ARTZ 370, and ARTZ 380. The course allows students to draw together their learning and their critical thinking into a defining experience, through the development of a synthesis project and a written presentation.

### **ARTZ 391 - Special Topics. 1-9 Credits.**

(R-12) Offered intermittently. Prereq., ARTH 250L. Experimental offerings by visiting professors, experimental offerings of new courses, and/or one-time offerings of current topics.

### **ARTZ 394 - Seminar- Environmental Drawing. 3 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Some restrictions might be applied to specific sections of this course.

### **ARTZ 398 - Internship. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereqs., ARTH 250L and/or consent of instructor. Special internships under instructor supervision offering practical experience.

### **ARTZ 402 - Teaching Art I-- K-12. 3 Credits.**

Offered autumn. Prereqs., ARTH 250L and junior standing. Preparation for art specialists including historical and contemporary trends in curriculum development, teaching procedures, child growth and development in art, resources, evaluation, democratic teaching practices, and directed teaching experiences in school setting.

### **ARTZ 403 - Teaching Art II-- K-12. 3 Credits.**

Offered spring. Prereq., ARTZ 302A. Continuation and practical application of ARTZ 302A.

### **ARTZ 410 - Advanced Research- Drawing. 3 Credits.**

(R-9) Offered intermittently. Advanced Research Drawing, Further exploration of time-based studio practice including assignments and student proposals.

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### **ARTZ 420 - Advanced Research- Painting. 3 Credits.**

(R-9) Offered intermittently. Prereq., ARTZ 351 or consent of instructor. Further exploration and establishment of a functional studio art practice including technical skills, concept development, and understanding of contemporary themes and theory.

### **ARTZ 430 - Advanced Research- Ceramics. 3 Credits.**

(R-9) Offered intermittently. Prereq., ARTZ 231A. An advanced critique-based studio class where students design their own project proposals and work one-on-one with the faculty.

### **ARTZ 451 - Advanced Research- Sculpture. 3 Credits.**

(R-9) Offered intermittently. Prereq., ARTZ 351 or consent of instructor. Further exploration of sculpture-related studio practice including technical and student proposals.

### **ARTZ 470 - Advanced Research- Printmaking. 3 Credits.**

(R-9) Offered intermittently. Prereqs., ARTH 250L and ARTZ 271A or consent of instructor. Further exploration of printmaking techniques including student proposals.

### **ARTZ 486 - Advanced Research- Photography. 3 Credits.**

(R-9) Offered intermittently. Prereqs., ARTZ 384 or 385 or 388 or consent of instructor. Further exploration of photography-related studio practice including technical and conceptual student proposals.

### **ARTZ 490 - Senior Research. 1 Credit.**

(R-2) Offered spring. Prereq., ARTZ 393. Self-directed research culminating in a short paper. This research provides narrative, perspective, and context for the studio project.

### **ARTZ 491 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., ARTH 250L. Experimental offerings by visiting professors, new courses, and/or one-time offerings of current topics.

### **ARTZ 492 - Independent Study. 2-6 Credits.**

(R-12) Offered intermittently. Prereqs., ARTH 250L or consent of instructor. Further exploration of studio practice including technical and conceptual student proposals.

### **ARTZ 494 - Seminar- Professional Practices. 3 Credits.**

Offered autumn. Prereqs., senior status and prereq. or coreq., ARTH 250L. Required of all graduating B.F.A. students. Introduction to professional practices and standards in the visual arts, including: presentation, portfolio development, career and exhibition opportunities, arts advocacy, and graduate school application.

### **ARTZ 495 - Senior Studio Project. 3 Credits.**

Offered spring. Capstone studio class of a self-determined ambitious thesis project. Specific projects formats are determined individually and include thematic integration. Examples of possible formats include a series of artworks, website videos, books, illustrations, collaborative multi-disciplinary events, multi-media presentations in other professions, data visualizations, etc

### **ARTZ 497 - Presentation to the Community. 1 Credit.**



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(R-2) Offered spring. This course examines the practical aspects of bringing a creative project forward to the public. Students will develop all aspects associated with staging a presentation of their final portfolio, including: writing proposals, press releases, CV and artist statements; developing budgets, seeking funding, installing artwork, and documenting presentation.

### **ARTZ 498 - Internship. 1-12 Credits.**

(R-12) Offered intermittently. Prereqs., ARTH 250L and consent of instructor. Special internship under instructor supervision offering practical experience.

### **ARTZ 499 - Senior Thesis/Capstone. 3 Credits.**

Offered spring. Prereqs., senior status, ARTZ 494, and successful passage of B.F.A. review. Required of B.F.A. students. Focus on completion of artwork and preparation for required spring B.F.A. exhibition. Further exploration of professional practices topics and career opportunities.

### **ARTZ 501 - Graduate Critique Seminar. 2 Credits.**

(R-16) Offered autumn and spring. Prereqs., graduate student status and consent of instructor. Weekly meetings to critique graduate student work. Level: Graduate

### **ARTZ 504 - Pre-Candidacy. 1 Credit.**

(R-2) Offered autumn and spring. Prereqs., graduate student status and consent of instructor. Taken concurrently with 500-level Graduate Research/Studio Processes. Emphasis on one-on-one instruction with faculty in preparation for review prior to thesis work. Level: Graduate

### **ARTZ 505 - Graduate Studio Research: Art. 1-3 Credits.**

(R-24) Offered spring. Prereqs., graduate student status and consent of instructor. Regular meetings with faculty to discuss development of individual work. Level: Graduate

### **ARTZ 506 - Graduate Pedagogy. 3 Credits.**

Offered autumn. Prereqs., first semester graduate student status and consent of instructor. Focus on current pedagogical practices in college-level art education. Emphasis on: syllabus, teaching philosophy, assignments preparation, public-speaking skills development, TA application and course shadowing. Level: Graduate

### **ARTZ 507 - Beyond Art School. 2 Credits.**

Prereqs., graduate student status and consent of instructor. Introduction to professional practices and standards in the visual arts. Emphasis on: portfolio, resume, and web development, exhibition opportunities, grant writing, and artist residencies.

### **ARTZ 508 - Expanded Studio Practice. 3-6 Credits.**

(R-6) Offered autumn and spring. Prereq., graduate student status and consent of instructor. Studio-based course with emphasis on collaborative practices across media. May include: topic-based studio assignments, thematic inquiry, responses to readings, and/or specific studio processes. Level: Graduate

### **ARTZ 511 - Graduate Research/Studio Practice: Drawing. 2-6 Credits.**

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(R-24) Offered autumn and spring. Prereq., consent of instructor. Graduate research in drawing, based on student's direction. Level: Graduate

### **ARTZ 521 - Graduate Research/Studio Practice: Painting. 3-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instructor. Advanced research in painting. Level: Graduate

### **ARTZ 531 - Graduate Research/Studio Practice: Ceramics. 3-6 Credits.**

(R-24) Offered autumn and spring. Prereq. consent of instructor. Advanced research in ceramics. Level: Graduate

### **ARTZ 551 - Graduate Research/Studio Practice: Sculpture. 2-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instructor. Advanced research in sculpture. Level: Graduate

### **ARTZ 571 - Graduate Research/Studio Practice: Printmaking. 2-12 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Advanced research in printmaking. Level: Graduate

### **ARTZ 580 - Data Arts. 3 Credits.**

Offered autumn and spring. Offered on the Mountain Campus, online delivery method. Data Arts teaches the essential and practical skills necessary to communicate information about data clearly and effectively through graphic and visual design. Level: Graduate

### **ARTZ 594 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Level: Graduate

### **ARTZ 595 - Special Topics. 1-9 Credits.**

(R-12) Offered intermittently. Prereqs., graduate student status and consent of instructor. Experimental offerings by visiting professors, experimental offerings of new courses, and/or one-time offerings of current topics. Level: Graduate

### **ARTZ 596 - Independent Study. 2-6 Credits.**

(R-18) Prereq., consent of instructor. Offered intermittently. Level: Graduate

### **ARTZ 597 - Research in Art History. 2-6 Credits.**

(R-18) Offered intermittently. Prereq., consent of instr. Level: Graduate

### **ARTZ 598 - Internship. 2-6 Credits.**

(R-6) Offered intermittently. Prereqs., graduate student status and Fine Arts Major and consent of instructor. Special internship under instructor supervision offering practical experience. Level: Graduate

### **ARTZ 697 - Thesis Paper. 1-3 Credits.**

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Offered intermittently. Prereqs., ARTZ 699 and consent of instructor. One-on-one instruction with thesis committee chair. Level: Graduate

### **ARTZ 699 - Thesis Exhibition. 1-12 Credits.**

(R-12) Offered intermittently. Prereq., graduate student status and consent of instructor. Thesis exhibition preparation. Level: Graduate

## Art History (ARTH)

### **ARTH 150H - Introduction to Art History. 3 Credits.**

Surveys world art from prehistory through the present day with the objective of developing a critical understanding of art forms in their historical and cultural context.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ARTH 160L - Global Visual Culture. 3 Credits.**

Offered autumn and spring. An introduction to the visual arts exploring various approaches to understanding art, art history and terminology, techniques and media, motivating factors behind the creative act.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **ARTH 161H - Topics in Art. 3 Credits.**

Offered intermittently. An introduction to a specific topic or subject in the visual arts.

Gen Ed Attributes: Historical Studies

### **ARTH 191 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings by visiting professors, new courses, and/or one-time investigations of current topics.

### **ARTH 200H - Art of World Civilization I. 3 Credits.**

Offered autumn. Survey of the history of visual art from prehistory to 1400.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **ARTH 201H - Art of World Civilization II. 3 Credits.**

Offered spring. Survey of the history of visual art from 1400 to the present.

Gen Ed Attributes: Historical Studies

### **ARTH 202H - Alternative Approaches to Art History. 3 Credits.**

Offered Autumn or Spring. Study of how the varied expressions of art across the world and across time are interconnected despite cultural shifts of their historic context.

Gen Ed Attributes: Historical Studies

### **ARTH 250L - Introduction to Art Criticism. 3 Credits.**

Offered autumn. Prereqs., WRIT 101 (or higher) or equivalent, ARTH 150H or ARTH 200H. Study of the description, interpretation, and evaluation of visual art as practiced in art criticism.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **ARTH 291 - Special Topics. 1-6 Credits.**

## University Of Montana

(R-12) Offered intermittently. Experimental offerings by visiting professors, new courses, and/or one-time investigations of current topics.

### **ARTH 333H - Architectural History I. 3 Credits.**

Offered autumn. Prereqs., Pre-req., ARTH 150H or ARTH 201H or consent of instructor. Exploration of architectural styles, designs, and choices of the built environment from prehistory to the modern age.

Gen Ed Attributes: Historical Studies

### **ARTH 334H - Architectural History II. 3 Credits.**

Prereqs., ARTH 201H and ARTH 250L or consent of instructor. Exploration of architectural styles, designs, and choices of the built environment from 1850 to the present.

Gen Ed Attributes: Historical Studies

### **ARTH 350 - Contemporary Art and Art Criticism. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course and ARTH 250L or consent of instructor. Exploration of artists, art works, critics, and theories from 1960 to the present.

Gen Ed Attributes: Writing Course-Advanced

### **ARTH 391 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings by visiting professors, new courses, and/or one-time investigations of current topics.

### **ARTH 400 - Art & Architecture of Egypt. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or 201H and ARTH 250L or consent of instructor. Exploration of Egyptian art and architecture from prehistory to the present.

### **ARTH 407 - Roman and Early Christian Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or 201H, and ARTH 250L or consent of instructor. Exploration of Roman art and architecture from prehistory to the Early Christian period.

### **ARTH 410 - Medieval Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or 201H, and ARTH 250L or consent of instructor. Exploration of Medieval art and architecture from 250 to 1400.

### **ARTH 425 - Art of the Renaissance. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or 201H, and ARTH 250L or consent of instructor. Exploration of European art and architecture from 1450 to 1600.

### **ARTH 428 - Baroque Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of European art and architecture from 1600 to 1700.

### **ARTH 433 - Ancient American Art. 3 Credits.**

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Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of ancient American art and architecture from prehistory to 1492.

### **ARTH 434 - Latin American Art. 3 Credits.**

Offered intermittently. Prereq., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of Latin American art and architecture from 1492 to the present.

Gen Ed Attributes: Writing Course-Advanced

### **ARTH 436 - The History of Women in Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of women and art from prehistory to the present.

### **ARTH 440 - 20th Century Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of art and architecture of the 20th century.

### **ARTH 444 - Open Range: Land Art and the American Consciousness. 3 Credits.**

Offered spring. Prereq., ARTH 200H and ARTH 250L or consent of instructor. The aim of this course is to investigate the sense of place in American visual arts of the 19th to 21st centuries. The course provides a roughly chronological view of the development of place in the American landscape, particularly in the west, and how that has been articulated by visual artists.

### **ARTH 445 - History of Photography. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or 201H and ARTH 250L or consent of instructor. Exploration of the history of photography from the early 19th century to the 21st century.

### **ARTH 458 - Advanced Research in Art History. 2-6 Credits.**

(R-9) Offered autumn and spring. Prereqs., a 300-level art history course and consent of instructor. Further exploration of art history topics including student proposals.

### **ARTH 459 - Advanced Research Art Crit. 3-6 Credits.**

(R-9) Offered intermittently. Prereqs., ARTH 350 and consent of instructor. Further exploration of art criticism topics including student proposals.

### **ARTH 464 - African Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of African art and architecture from prehistory to the present.

### **ARTH 465 - Spanish Art. 3 Credits.**

Offered intermittently. Prereqs., ARTH 150H or ARTH 201H and ARTH 250L or consent of instructor. Exploration of Spanish art and architecture from prehistory to the present.

### **ARTH 491 - Special Topics. 1-6 Credits.**

## University Of Montana

(R-9) Offered intermittently. Prereq., ARTH 250L. Experimental offerings by visiting professors, new courses, and/or one-time investigation of current topics.

### **ARTH 492 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereqs., a 300 or 400 level ARTH course, and consent of instructor. Further exploration of studio practice including technical and conceptual student proposals.

### **ARTH 494 - Seminar in Art History & Criticism. 3 Credits.**

(R-9) Offered intermittently. Prereq., a 300 or 400 level ARTH course, and consent of instructor. Upper-division seminar in varying topics of art history and criticism.

### **ARTH 498 - Internship. 1-6 Credits.**

(R-12) Offered intermittently. Prereqs., ARTH 250L and/or consent of instructor. Special internship under instructor supervision offering practical experience.

### **ARTH 503 - Critical Theories in the Visual Arts I. 3 Credits.**

Prereq., consent of instructor. Seminar on the history of art criticism. Level: Graduate

### **ARTH 509 - Critical Theories in Visual Arts II. 3 Credits.**

Prereq., ARTH 503 or consent of instructor. Continuation of ARTH 503 with an emphasis on contemporary theories and topics. Level: Graduate

### **ARTH 533 - Graduate Architectural History I. 3 Credits.**

Offered autumn, Mountain Campus. Offers students a knowledge and understanding of architecture styles, designs and choices of the built environment from prehistoric megalithic architecture to the start of the modern age.

### **ARTH 534 - Graduate Architectural History II. 3 Credits.**

Offers students a knowledge and understanding of architecture styles, designs and choices of the built environment of the modern age. Level: Graduate

### **ARTH 550 - Graduate Studies/Art History. 2-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instructor. Further research for graduate students in art history. Level: Graduate

### **ARTH 597 - Research in Art History. 3-9 Credits.**

(R-24) Offered intermittently. Prereq., consent of instructor. Research for graduate students in art history and/or studio. Level: Graduate

### **ARTH 698 - Methodologies in Art History. 3-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Investigation of the historiography and practitioners of art history. Level: Graduate

### **ARTH 699 - Thesis. 1-6 Credits.**

## University Of Montana

(R-6) Offered every term. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate



## Astronomy (ASTR)

### **ASTR 131N - Planetary Astronomy. 3 Credits.**

Offered autumn. Prereq., high school algebra and geometry. An introduction to observational, historical, and planetary astronomy. Students will have a chance to visit UM's state-of-the-art planetarium and observe with our 0.4 meter telescope.

Gen Ed Attributes: Natural Science Course (N)

### **ASTR 132N - Stars, Galaxies, and the Universe. 3 Credits.**

Offered spring. Prereq., high school algebra and geometry. An introduction to stars, stellar evolution, galaxies, and cosmology. Students will have a chance to visit UM's state-of-the-art planetarium and observe with our 0.4 meter telescope.

Gen Ed Attributes: Natural Science Course (N)

### **ASTR 134N - Planetary Astronomy Lab. 1 Credit.**

Offered autumn. Prereq. or coreq., ASTR 131N Laboratory exercises in observational and planetary astronomy. Students will have a chance to visit UM's state-of-the-art planetarium and observe with our 0.4 meter telescope. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **ASTR 135N - Stars, Galaxies, and the Universe Lab. 1 Credit.**

Offered spring. Prereq. or coreq., ASTR 132N. Laboratory exercises in observational, stellar, and galactic astronomy. Students will have a chance to visit UM's state-of-the-art planetarium and observe with our 0.4 meter telescope. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **ASTR 142N - The Evolving Universe. 4 Credits.**

Offered spring. Prereq., working knowledge of precalculus (ie., college algebra and college trigonometry). Overview of recent developments in planetary system formation, stars, galaxies, and cosmology. Some astronomical observing required outside of normal class hours.

Gen Ed Attributes: Natural Science Course (N)

### **ASTR 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

### **ASTR 198 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

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### **ASTR 292 - Independent Study. 1-6 Credits.**

Course material appropriate to the needs and objectives of the individual student.

### **ASTR 351 - Planetary Science. 3 Credits.**

Offered autumn even-numbered years. Prereq., PHSX 215N - PHSX 216N or PHSX 205N - PHSX 206N and M 162 or M 171. Physical and geological characteristics of planets, satellites, asteroids, comets, and meteoroids, with an emphasis on comparative planetology.

### **ASTR 353 - Galactic Astrophysics. 3 Credits.**

Offered spring odd-numbered years. Prereq., ASTR 132N or ASTR 142N, and PHSX 217N - PHSX 218N or PHSX 207N - PHSX 208N, and M 273. The nature of the Milky Way galaxy and other galaxies, galactic evolution, the large scale structure of the universe, active galaxies and quasars, and cosmology, including the early universe.

### **ASTR 362 - Observational Astronomy. 3 Credits.**

Offered autumn even-numbered years. Prereq., ASTR 132N or ASTR 142N, and PHSX 207N - PHSX 208N or PHSX 217N - PHSX 218N. Laboratory study of the probabilistic behavior of light, data acquisition with telescopes, digital imaging and spectroscopy. Emphasis on fundamental statistical tools, scientific computer programming, and written and oral presentation of scientific results.

### **ASTR 363 - Stellar Astronomy & Astrophysics I. 3 Credits.**

Offered autumn odd-numbered years. Prereq., ASTR 132N or ASTR 142N, and PHSX 207N- PHSX 208N or PHSX 217N- PHSX 218N, and prereq., or coreq., M 273. Detailed application of physical laws to determine the nature of the stars; analysis of stellar spectra and atmospheres; solar astrophysics; structure of stars and their evolution.

### **ASTR 365 - Stellar Ast & Astrophys II. 3 Credits.**

Offered spring even-numbered years. Prereq., ASTR 363. Continuation of ASTR 363.

### **ASTR 391 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ASTR 392 - Independent Study. 1-6 Credits.**

Course material appropriate to the needs and objectives of the individual student.

### **ASTR 398 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **ASTR 492 - Independent Study. 1-12 Credits.**

### **ASTR 494 - Senior Capstone Seminar. 1 Credit.**

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Offered autumn. Prereq., junior or senior standing in physics. Each student will present a seminar on research performed prior to or during their senior year.

### **ASTR 499 - Seminar/Workshop. 1 Credit.**

Offered autumn. Prereq., junior or senior standing in physics. Each student will present a seminar on research performed prior to or during their senior year.

## Athletic Training (ATEP)

### **ATEP 534 - Emergency Management in AT. 3 Credits.**

Prereq., Athletic Training Student. Serves as an introduction to athletic training practice. Emphasis on the prevention, care, and management of acute injuries and illnesses, as well as risk management, environmental concerns, and protective taping and equipment. Level: Graduate

### **ATEP 535 - Athletic Training Techniques II. 3 Credits.**

Prereq., Must be accepted into the Master of Athletic Training (MAT) program. Provides an investigation into the study of evidence based medicine, epidemiology and injury surveillance, cultural competency, and mental health issues. Level: Graduate

### **ATEP 536 - Foundations in AT. 2 Credits.**

This course presents the overarching framework, principles, and core responsibilities of athletic training practice working in multidisciplinary healthcare teams. The course also provides the necessary foundation for athletic training practice focusing on patient-centered care, interprofessional practice, evidence-based practice, quality improvement and healthcare informatics. Level: Graduate

### **ATEP 537 - Foundations of Research and Evidence Based Practice in Athletic Training. 2 Credits.**

This course explores quantitative and qualitative research methodologies used in athletic training and evaluation of published research in the field. The course will introduce evidence-based practice research, provide strategies for reading and writing critically, and offer a plan to applying evidence-based practice in daily clinical practice. Level: Graduate

### **ATEP 540 - Practicum in Athletic Training I. 3 Credits.**

Prereq., Athletic Training Student. Builds on skills previously acquired and introduces new skills related to current coursework. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. First in the series of four practicum courses. Level: Graduate

### **ATEP 541 - Practicum in Athletic Training II. 3 Credits.**

Prereq., Athletic Training Student. Expands on skills previously acquired and introduces new skills related to current coursework. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. Second in the series of four practicum courses. Level: Graduate

### **ATEP 542 - Lower Extremity Assessment. 3 Credits.**

Prereq., Athletic Training Student. Provides a study of anatomy and physiology, assessment, evaluation techniques, treatment, and management of conditions affecting the lower extremities and lumbar spine. Level: Graduate

### **ATEP 543 - Orthopedic Assessment I. 3 Credits.**

Provides a study of anatomy and physiology, assessment, evaluation techniques, treatment, and management of conditions affecting the lower extremities and lumbar spine. Level: Graduate

### **ATEP 544 - Upper Extremity Assessment. 3 Credits.**

## University Of Montana

Prereq., Athletic Training Student. Provides a study of anatomy and physiology, assessment, evaluation techniques, treatment, and management of conditions affecting the upper extremities, head, and thoracic and cervical spine. Level: Graduate

### **ATEP 545 - Sports Related Concussion. 2 Credits.**

This course discusses assessment techniques commonly used in the clinical evaluation of sport related concussion. The course also provides the necessary foundation for establishing inter-professional care teams to treat sport related concussion. Level: Graduate

### **ATEP 546 - General Medical Assessment. 3 Credits.**

Prereq., Athletic Training Student. Examines the recognition, assessment, and management of general medical conditions and illnesses. Level: Graduate

### **ATEP 547 - Orthopedic Assessment II. 3 Credits.**

Provides a study of anatomy and physiology, assessment, evaluation techniques, treatment, and management of conditions affecting the upper extremities, head, and thoracic and cervical spine. Level: Graduate

### **ATEP 550 - Practicum in Athletic Training III. 3 Credits.**

Prereq., Athletic Training Student. Broadens skills previously acquired and introduces new skills related to current coursework. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. Third in the series of four practicum courses. Level: Graduate

### **ATEP 551 - Practicum in Athletic Training IV. 3 Credits.**

Prereq., Athletic Training Student. Reviews and refines skills previously acquired and evaluated in previous coursework. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. Fourth in the series of four practicum courses. Level: Graduate

### **ATEP 560 - Clinical Immersion in AT I. 2 Credits.**

Practice intensive experience that allows the student to experience the totality of care provided by athletic trainers. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. This is the first in the series of three immersion courses. Level: Graduate

### **ATEP 561 - Clinical Immersion in AT II. 6 Credits.**

Practice intensive experience that allows the student to experience the totality of care provided by athletic trainers. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. This is the second in the series of three immersion courses. Level: Graduate

### **ATEP 562 - Clinical Immersion in AT III. 4 Credits.**

Practice intensive experience that allows the student to experience the totality of care provided by athletic trainers. Students will be assigned to a clinical education rotation under the direct supervision of a clinical preceptor. This is the third in the series of three immersion courses. Level: Graduate

### **ATEP 566 - Therapeutic Modalities. 3 Credits.**

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Offered spring. Prereq., ATEP 550. Physiology, indications, contraindications, and the application of therapeutic modalities for athletic injuries. Level: Graduate

### **ATEP 569 - Clinical Anatomy Laboratory. 1 Credit.**

Offered Fall. Prereq., Athletic Training Student. Clinical applications of anatomy in Athletic Training. Laboratory time for practical applications including prosected cadavers, surface anatomy, osteology, radiology, functional analysis of movement, applied clinical anatomy and sports application. Level: Graduate

### **ATEP 572 - Therapeutic Exercise. 3 Credits.**

Offered spring. Prereq., ATEP 566. Theories and application methods of comprehensive therapeutic exercise programs for athletic injuries. Level: Graduate

### **ATEP 574 - Manual Therapy Techniques. 3 Credits.**

Offered summer. Prereq., ATEP 572. Theories and application methods of comprehensive manual therapy for athletic injuries. Level: Graduate

### **ATEP 576 - Performance and Technology in Athletic Training. 3 Credits.**

This course provides an opportunity for students to engage in conversations with clinical experts on a wide range of athletic training topics. Level: Graduate

### **ATEP 578 - Organization & Administration in Athletic Training. 3 Credits.**

Prereq., Athletic Training Student. Explores leadership, organization, administration, and legal issues in athletic training. Topics include leadership; insurance; ethics; professional development; the planning, organization, operations, and assessment of athletic training programming and facilities. Fiscal and risk management will also be examined. Level: Graduate

### **ATEP 580 - Pharmacology for Sports Medicine. 1-3 Credits.**

Prereq., graduate level student. Explores the pharmaceutical and chemical processes of therapeutic interventions and therapies. This course examines the constraints placed on patients in the performance environment as well management, protocols, and legal issues. Level: Graduate

### **ATEP 581 - Therapeutic Interventions I. 3 Credits.**

Theories and application methods of comprehensive therapeutic treatment, modalities and rehabilitation programs for injuries commonly sustained by the physically active to the lower extremity. The first course in a series of three courses. Level: Graduate

### **ATEP 583 - Therapeutic Interventions II. 3 Credits.**

Theories and application methods of comprehensive therapeutic treatment, modalities and rehabilitation programs for injuries commonly sustained by the physically active to the upper extremity. The second in a series of three courses. Level: Graduate

### **ATEP 585 - Therapeutic Interventions III. 3 Credits.**

Theories and application of methods of comprehensive manual therapy and joint manipulation techniques for the treatment of athletic injuries. Level: Graduate

**ATEP 588 - Healthcare Administration and Leadership in Athletic Training. 3 Credits.**

Exploration of the aspects of athletic training leadership styles, organization and administration. This course focuses on program leadership, risk management, policy and procedure development, and organizational operations. Level: Graduate

**ATEP 590 - Research. 2 Credits.**

This course explores quantitative and qualitative research methodologies used in athletic training and evaluation of published research in the field, including but not limited to: quality improvement projects, novel research, case studies, and systematic reviews. The first course of this series involves developing and completing a practice-based research project, culminating in the creation and submission of research abstracts. Level: Graduate

**ATEP 594 - Seminar in Athletic Training. 1 Credit.**

This course provides an opportunity for students to engage in conversations with clinical experts focused on transition to clinical practice. Level: Graduate

**ATEP 599 - Research Capstone in Athletic Training. 2 Credits.**

This course explores quantitative and qualitative research methodologies used in athletic training and evaluation of published research in the field, including but not limited to: quality improvement projects, novel research, case studies, and systematic reviews. The second course of this series involves disseminating a practice-based research project, culminating in the creation of a final written document and presentations. Level: Graduate

## Biochemistry (BCH)

### **BCH 110 - Introductory Biology for Biochemists. 3 Credits.**

Prereq. CHMY 141N/142N or equivalent. Prereq. or Coreq., CHMY 143N/144N. Coreq., BCH 111. An introductory course that explores biomolecules and their roles in life processes. Provides a foundation for Cellular and Molecular Biology (BIOB 260), Genetics and Evolution (BIOB 272), Introductory Biochemistry Seminar (BCH 294), and many other advanced science courses.

### **BCH 111 - Introductory Biology for Biochemists Lab. 1 Credit.**

Prereq., CHMY 141N/142N or equivalent. Prereq., or Coreq., CHMY 143N/144N. Coreq., BCH 110. Introduction to the experimental techniques used to study biomolecules and their roles in life processes. Provides a foundation for other advanced level laboratory courses in chemistry and biochemistry.

### **BCH 294 - Seminar/Workshop. 1 Credit.**

Offered spring. Prereq., CHMY 143N or equivalent. An introduction to important advances in biochemistry through readings from the primary literature and discussion of this literature. Faculty members will also make presentations on their research. Graded credit/no credit.

### **BCH 380 - Biochemistry. 4.000 Credits.**

Offered autumn and spring. Prereq., CHMY 223 or BIOB 260. Fundamental biochemistry; chemistry and metabolism of biomolecules, energy relationships in metabolism; storage, transmission, and expression of genetic information. Credit not allowed for both BCH 380 and 480-482.

### **BCH 480 - Advanced Biochemistry I. 3 Credits.**

Offered autumn. Prereq., CHMY 223. Primarily for science majors. The chemistry of biomolecules, with emphasis on the structure and function of proteins, carbohydrates, lipids and nucleic acids. The chemistry and regulation of the transfer and expression of genetic information, protein synthesis. Credit not allowed for both BCH 380 and 480-482. Level: Undergraduate-Graduate

### **BCH 482 - Advanced Biochemistry II. 3 Credits.**

Offered spring. Prereq., BCH 480 or equiv. Continuation of BCH 480. Enzyme kinetics, metabolism, especially macromolecule biosynthesis and energy acquisition pathways, and the associated energetics and molecular physiology. Credit not allowed for both BCH 380 and BCH 480-482. Level: Undergraduate-Graduate

### **BCH 486 - Biochemistry Research Lab. 3 Credits.**

Offered spring. Prereq., BCH 380 or 480. Applications of biochemical principles to modern protein biochemistry. Basic micro- and molecular biology techniques are used to produce mutant proteins; then students learn basic and advanced biophysical techniques to characterize the mutant proteins. Level: Undergraduate-Graduate

### **BCH 490 - Undergraduate Research. 1-10 Credits.**

(R-10) Offered every term. Consent of instr. Independent research under the direction of a faculty member. Level: Undergraduate

### **BCH 491 - Special Topics. 1-10 Credits.**



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(R-10) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **BCH 498 - Internship/Cooperative Ed. 1-15 Credits.**

(R-15) Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate-Graduate

### **BCH 499 - Senior Thesis/Capstone. 3-6 Credits.**

(R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give an oral or poster presentation at the Undergraduate Research Symposium or a scientific meeting. Level: Undergraduate

### **BCH 547 - Experimental Molecular, Cellular, and Chemical Biology. 1 Credit.**

(R-8) Offered every term. Prereq., graduate standing or consent of instr. Same as BIOB 547. Focus on experimental design, methods, and presentation of experimental results for graduate students in laboratories with a molecular, cellular or chemical biological focus. Level: Graduate

### **BCH 561 - RNA Structure & Function. 1 Credit.**

(R-8) Offered every semester. Prereq., BCH 482, BIOB 260, and consent of instr. Exploration of current scientific literature and new data that focuses on RNA biochemistry. Emphasis on literature relevant to research on RNA viruses and ribosomes and protein synthesis. Level: Graduate

### **BCH 570 - Intro to Research. 1 Credit.**

(R-2) Offered autumn and spring. Prereq., graduate standing. Required course for Biochemistry and Biophysics graduate students. Students are acquainted with faculty research projects. Instruction in basic research techniques, research equipment. Introduction to relevant scientific research literature. Level: Graduate

### **BCH 581 - Physical Biochemistry. 3 Credits.**

Offered spring odd-numbered years. Techniques of physical chemistry used in studying biological structure and function of macromolecules. Emphasis is on spectroscopic methods, hydrodynamic methods and x-ray and other scattering and diffraction techniques. Level: Graduate

### **BCH 582 - Proteins and Enzymes. 3 Credits.**

Offered autumn even-numbered years. Prereq., BCH 482 or equivalent. An investigation into the structure/function relationship in proteins and a detailed exploration of enzyme kinetics, using examples from current literature. Level: Graduate

### **BCH 584 - Nucleic Acids. 3 Credits.**

Offered autumn odd-numbered years. Prereq., BCH 482 or equivalent. Emphasis on critical reading of current literature that investigates structure, chemistry, and function of nucleic acids. Level: Graduate

### **BCH 595 - Special Topics. 1-6 Credits.**

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(R-6) Offered intermittently. Prereq., graduate standing and consent of instr. Experimental offering of new courses by resident or visiting faculty. Level: Graduate

### **BCH 597 - Research. 1-18 Credits.**

(R-18) Offered autumn and spring. Directed individual research and study appropriate to the background and objectives of the student. Level: Graduate

### **BCH 599 - Thesis. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., master's student in biochemistry and biophysics. Laboratory research for and preparation of a master's thesis. Level: Graduate

### **BCH 600 - Cell Organization & Mechanisms. 3 Credits.**

Offered spring even-numbered years. Prereq., BCH 480 or consent of instr. Same as BMED 600. Primary literature exploration of the regulation of structure, function, and dynamics of eukaryotic cells. Topics include membranes, cytoskeleton, transcription, translation, signal transduction, cell motility, cell proliferation, and programmed cell death. Level: Graduate

### **BCH 694 - Biochemistry & Biophysics Seminar. 1 Credit.**

(R-10) Credit/No credit only. Offered Autumn and Spring. Prereq., graduate standing or consent of instructor. Presentation of current research in Structural Biology, Biochemistry, Biophysics, or related fields by invited outside speakers, UM faculty, and senior graduate students. Level: Graduate

### **BCH 699 - Dissertation. 1-20 Credits.**

(R-20) Offered intermittently. Prereq., doctoral student in biochemistry. Laboratory research for and preparation of a doctoral dissertation. Level: Graduate

## Biology (BIOL)

### **BIOL 315 - Peer Advising Internship. 1 Credit.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Supervised training and internship for peer advisors who will gain knowledge and ability to communicate degree requirements and relate the various degree offerings to professional and career goals. No more than two credits are allowed toward upper-division major requirements.

## Biology - Ecological (BIOE)

### **BIOE 172N - Introductory Ecology. 3 Credits.**

Offered intermittently. An introduction to ecological principles, stressing the structure and function of natural communities and examining human's role in these ecosystems.

Gen Ed Attributes: Natural Science Course (N)

### **BIOE 342 - Field Ecology. 5 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOB 272 and one year of college math, including statistics. The principles and practices of the study of animals and plants in their natural environments, including human influences, with focus on the Crown of the Continent area of the Rock Mountains and taught entirely outdoors.

### **BIOE 370 - General Ecology. 3 Credits.**

Offered autumn. Prereq., BIOB 272. Analysis of the distribution and abundance of plants and animals. Includes individual, population and community-level processes (e.g., population growth and regulation, competition, predation, succession, nutrient cycling, energy flow and community organization).

### **BIOE 371 - General Ecology Lab (equivalent to 271). 2 Credits.**

Offered autumn. Prereq. or Coreq., BIOE 370 and either STAT 216 or WILD 240. Methods of describing and testing alternative explanations for patterns in nature. The use of scientific methodology in ecology.

### **BIOE 394 - Seminar/Workshop. 2 Credits.**

Offered autumn. Preparatory readings and attendance at seminars on a wide variety of ecological and wildlife management topics followed by critiques.

### **BIOE 400 - Aquatic Microbial Ecology. 3 Credits.**

Offered summer only at the Flathead Lake Biological Station. Prereq., BIOB 170N, CHMY 121N, and one year of college math, or consent of instructor. This course is an immersive (2 week) summer class offered to both undergraduate and graduate students with interests in microbiology and ecology. The course includes lectures, laboratories, and several field-based sampling trips. The course provides conceptual foundation and hands-on field and laboratory training in modern methods in aquatic microbial ecology.

### **BIOE 403 - Comparative Vertebrate Anatomy. 4 Credits.**

Offered autumn. Prereq., BIOB 260 or BIOB 272. Comparative study of vertebrate morphology using evolutionary transitions among species to explore design and function. Laboratory includes systematic study of organ systems and workshops in the dynamics of biomechanics and functional morphology.

### **BIOE 406 - Behavior & Evolution. 3 Credits.**

Offered autumn, odd-numbered years. Prereq., BIOB 272. Diversity of animal behavior in an evolutionary context including inheritance of behavior, diets, avoidance responses, mating systems and sexual selection, parental care, and evolution of animal groups and societies.

### **BIOE 409 - Behavior & Evolution Discussion. 1 Credit.**

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Offered autumn, odd-numbered years. Co-req., BIOE 406. Diversity of animal behavior in an evolutionary context including inheritance of behavior, diets, avoidance responses, mating systems and sexual selection, parental care, and evolution of animal groups and societies. This discussion course complements the lectures of BIOE 406 by examining both landmark and recent literature. It also includes a written component.

### **BIOE 416 - Alpine Ecology. 3 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342 or BIOE 370/371. Distribution, abundance and life cycles of plants and animals and their unique ecophysiological adaptations to life in the rigorous environments of the high mountains above the timberline, with emphasis on the Crown of the Continent area.

### **BIOE 428 - Freshwater Ecology. 5.000 Credits.**

Offered spring. Prereq., BIOB 160N and either CHMY 123 or 143N. Physical and chemical dynamics of lakes and streams. Diversity, distribution and dynamics of freshwater organisms.

### **BIOE 439 - Stream Ecology. 3 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342 or BIOE 370/371, CHMY 121N. The biota and biogeochemical processes of running waters with unifying principles and contemporary research approaches.

### **BIOE 440 - Conservation Ecology. 3 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342 or BIOE 370/371. Concepts and approaches for sustaining biodiversity and other natural goods and services provided by terrestrial and aquatic systems.

### **BIOE 447 - Ecosystem Ecology. 3 Credits.**

Offered spring, odd-numbered years. Prereq., BIOB 160N or BIOB 170N or BIOO 105N or BIOE 172N or consent of instr. Introduction to systems thinking and the ecosystem concept, review of water and energy balances, carbon cycling, nutrient cycling, trophic dynamics, and species effects on ecosystem function across terrestrial and aquatic ecosystems. Level: Undergraduate

### **BIOE 448 - Terrestrial Plant Ecology. 4 Credits.**

Offered intermittently. Prereq. BIOB 272. The interrelationships between plants and plant communities and their natural environment.

### **BIOE 451 - Landscape Ecology. 3 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342 or BIOE 370/371. Biophysical processes that determine landscape and ecosystem structure and function using remote sensing tools, geographic information systems and dynamic models to demonstrate landscape change.

### **BIOE 453 - Lake Ecology. 3 Credits.**

Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342 or BIOE 370/371, CHMY 121N and CHMY 123N. The physical, chemical and biological characteristics of lake ecosystems with an emphasis on nutrient cycling, food web interactions and water quality.

### **BIOE 458 - Forest and Fire Ecology. 3 Credits.**

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Offered summers only at Flathead Lake Biological Station. Prereq., BIOE 342, or BIOE 370 and 371, or consent of instructor. Patterns, processes, and disturbances of northern Rocky Mountain forests in the context of principles of population, community, landscape, and ecosystem ecology with particular emphasis given to ecology of wildfire.

### **BIOE 485 - Plant Evolution. 3 Credits.**

Offered Intermittently. Prereq., BIOB 272. Lecture, reading and discussion on the evolutionary processes that shape major patterns of plant diversity. Topics include but are not restricted to: local adaptation, floral and mating system evolution, polyploidy, genome evolution, and speciation. Level: Undergraduate-Graduate

### **BIOE 490 - Advanced Undergrad Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **BIOE 594 - Seminar. 1-4 Credits.**

(R-12). Offered intermittently. Prereq. graduate standing. Presentations by student, faculty, and associates on issues and topics in their field.

## Biology - Organismal (BIOO)

### **BIOO 105N - Introduction to Botany. 3 Credits.**

Offered spring. Introduction to the plant kingdom including anatomy, physiology and ecology.

Gen Ed Attributes: Natural Science Course (N)

### **BIOO 320 - General Botany. 5 Credits.**

Offered autumn. Prereq., BIOB 260 and BIOB 272. Anatomy, morphology, ecology and physiology of photosynthetic organisms.

### **BIOO 335 - Rocky Mountain Flora. 3 Credits.**

Offered spring and summer. Prereq., one college-level course in Biology or consent of instr. Elements of the evolution, geography and natural affinities of flowering plants. Identification using a manual of native plants of Montana.

### **BIOO 340 - Biology and Management of Fishes. 4 Credits.**

Offered autumn. Prereq., BIOB 272 and either STAT 216 or WILD 240. Diversity, adaptations and ecology of fishes. Analysis and management of fish populations and communities.

### **BIOO 433 - Plant Physiology. 3 Credits.**

Offered spring. Prereq., BIOB 260 or consent of the instructor. The molecular, biochemical and biophysical basis of plant function, from the subcellular to the whole organism level.

### **BIOO 434 - Plant Physiology Lab. 1 Credit.**

Offered spring. Prereq or coreq., BIOO 433. Laboratory exercises designed to familiarize students with concepts and techniques in plant physiology.

### **BIOO 462 - Entomology. 4 Credits.**

Offered alternate springs. Prereq. or Coreq., BIOB 272. The classification, morphology, anatomy, development, life-history, behavior and ecology of insects. Labs include identification of major insect groups, internal and external anatomy and student collections.

### **BIOO 470 - Ornithology. 4 Credits.**

Offered spring. Prereq. or Coreq., BIOB 272; major of biology, Pre-Wildlife Biology, or Wildlife Biology, and must be of junior or senior standing. The classification, structure, evolution, behavior and ecology of birds.

### **BIOO 475 - Mammalogy. 4 Credits.**

Offered autumn. Prereq., BIOB 272. The evolution, systematics, anatomy, physiology and ecology of mammals.

### **BIOO 490 - Advanced Undergrad Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., junior or senior standing and consent of instr. Independent research under the direction of a faculty member.

## Biology - Systems Ecology (BIOS)

### **BIOS 532 - Ecosystem Ecology. 4 Credits.**

Offered autumn every other year. Prereq. CHMY 141N or the equivalent. Coreq. CHMY 143N and BCH 111. This course includes the fundamentals of an ecosystem approach to ecological research by emphasizing relationships among physical, chemical, and biotic elements of interactive systems. It will provide a fundamental basis for more advanced Systems Ecology courses (e.g., Limnology, Integrated Systems Ecology, Landscape Genetics, etc.). Level: Graduate

### **BIOS 534 - Integrated Systems Ecology. 3 Credits.**

Offered spring semester alternate years. Principles, theories and empirical studies that describe the complex attributes and processes of coupled natural and human systems. Landscape, climate, economic and social change dynamics and processes emphasized. Flagship course of the UM-DBS Systems Ecology Program. Students strongly advised but not required to take BIOS 532 Fundamentals of Ecosystem Ecology prior to this course. Level: Graduate

### **BIOS 594 - Seminar. 1-6 Credits.**

Offered intermittently. Prereq. graduate standing. Presentations by student, faculty, and associates on issues and topics in their field. Level: Graduate

### **BIOS 595 - Special Topics. 1-4 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOS 597 - Research. 1-10 Credits.**

(R-10) Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **BIOS 599 - Thesis. 1-10 Credits.**

(R-10) Field and laboratory research on, and writing of, a student's masters thesis. Level: Graduate

### **BIOS 699 - Thesis. 1-10 Credits.**

(R-10) Field and laboratory research on, and writing of, a student's masters thesis. Level: Graduate



## Biology-General (BIOB)

### **BIOB 101N - Discover Biology. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Contemporary exploration of the organization and complexity of living organisms and the systems in which they live. The central question of biology--relationship between form and function, acquisition and use of energy, and continuity between generations will be addressed through lectures and laboratory investigations. Credit not allowed toward a major in biology. Credit not allowed for both BIOB 101N and BIOB 160N. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 109N - Montana Ecosystems. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. An introduction to the landscapes and ecosystem diversity of Montana, with an emphasis on exploring the dominant habitats of western Montana. Required, integrated laboratory includes field trip investigations, classroom lab exercises, and presentations. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 130N - Evolution and Society. 3 Credits.**

Offered intermittently. A focus on relationships between evolutionary biology and important social issues, including the evolution of drug-resistant diseases, the construction and use of genetically-modified organism, human evolutionary biology, and experimental laboratory evolution.

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 160N - Principles of Living Systems. 3 Credits.**

Offered every term. Unifying principles of biological structure-function relationships at different levels of organization and complexity. Consideration of reproduction, genetics, development, evolution, ecosystems, as well as the inter-relationships of the human species to the rest of life. Students requiring a laboratory should also register for BIOB 161N. Credit not allowed for both BIOB 101N and 160N.

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 161N - Principles of Living Systems Lab. 1 Credit.**

Offered autumn and summer. Prereq., or Coreq., BIOB 160N. Lab experiences illustrate biological principles underlying growth, reproduction, development, genetics and physiology, and are designed to give students practice in scientific methods of description, development of hypotheses, and testing. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 170N - Principles of Biological Diversity. 3 Credits.**

Offered spring and summer. Survey of the diversity, evolution and ecology of life including prokaryotes, viruses, protista, fungi, plants and animals.

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Gen Ed Attributes: Natural Science Course (N)

### **BIOB 171N - Principles of Biological Diversity Lab. 2 Credits.**

Offered spring and summer. Prereq. or Coreq., BIOB 170N. The diversity of life including prokaryotes, viruses, protista, fungi, plants and animals including structure and evolutionary relationships. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 191 - Special Topics. 1-6 Credits.**

Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOB 191N - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 198 - Internship. 1-6 Credits.**

Prereq., consent of Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BIOB 210N - Communicating Biology. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., WRIT 101 or equivalent. An examination of modern methods for sharing scientific discovery with an emphasis on biological issues related to the human experience.

Gen Ed Attributes: Natural Science Course (N), Writing Course-Intermediate

### **BIOB 226N - General Science: Chemical & Life Sciences. 5 Credits.**

Offered spring. Prereq., or coreq., M 132. Integrated lectures, laboratory exercises, and field trips on topics in chemical and biological science for prospective elementary school teachers and the non-scientist. 2, two-hour laboratory sessions are required each week. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOB 260 - Cellular and Molecular Biology. 4 Credits.**

Offered autumn and summer. Prereq. BIOB 160N (preferred) or BCH 110/111 (preferred) or B- or higher in BIOH 112; and either CHMY 123 or CHMY 143N. Analytical exploration of the structure and function of the cell, the fundamental unit of life, with an emphasis on energy transformations and information flow. Topics include molecular building blocks, membranes, organelles, and mechanisms of replication, gene expression, metabolism, signal transduction, cell birth, cell death, and cell differentiation.

### **BIOB 272 - Genetics and Evolution. 4 Credits.**

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Offered spring. Prereq., either (BIOB 260) OR (both BIOB 160N and BIOB 170N) OR (just BIOB 160N with a B- or better); AND one of M 121, 122, 151, 162, or 171. Principles and mechanisms of inheritance and evolution. Population genetics, fossil record, macroevolution, speciation, extinction, systematics, molecular evolution.

### **BIOB 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOB 295 - Student Teaching. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Organized student teaching.

### **BIOB 298 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BIOB 301 - Developmental Biology. 3 Credits.**

Offered autumn. Prereq., BIOB 260; BIOB 272 recommended. An analysis of the origin and development of form and patterns in organisms, stressing the processes of growth and differentiation in plants and animals. Graded traditional letter grade only.

### **BIOB 375 - General Genetics. 3 Credits.**

Offered spring. Prereq., BIOB 260 and 272. This course will focus on the molecular genetics of eukaryotes, with special emphasis on transmission genetics and gene structure and regulation.

### **BIOB 390 - Undergraduate Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **BIOB 391 - Special Topics. 1-10 Credits.**

(R-10) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOB 392 - Independent Study. 1-10 Credits.**

(R-10) Offered every term. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOB 395 - Practicum. 1-12 Credits.**

### **BIOB 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

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### **BIOB 410 - Immunology. 3 Credits.**

Offered autumn. Prereq., BIOB 260. Current concepts and methods in Immunology.

### **BIOB 411 - Immunology Laboratory. 2 Credits.**

Offered autumn. Prereq., or Coreq., BIOB 410. Modern techniques for analysis of immune responses.

### **BIOB 425 - Advanced Cellular & Molecular Biology. 3 Credits.**

Offered spring. Prereq., BIOB 260 and 272; BCH 380 strongly recommended. Cell structure and function, cell cycle, cellular signaling, molecular basis of cancer, regulated cell death, membrane transport, organelle dynamics, cytoskeleton, cell adhesion, and the molecular basis of learning and memory.

### **BIOB 435 - Comparative Animal Physiology. 3 Credits.**

Offered Spring. Prereq., BIOB 260 or equivalent. Animal physiology with emphasis on diversity of functional processes, with strong links to broader ecological and evolutionary contexts. Level: Undergraduate-Graduate

### **BIOB 467 - Molecular Analysis of Development. 2 Credits.**

(R-12) Offered alternate spring (UM campus, face-to-face). Prereq. Consent of Instructor. This course covers key topics in developmental biology through the detailed study of the primary literature. Seminar topics are updated for each year the course is offered and listed in syllabus. With help of the instructor, the students present each topic and lead a discussion each class period based on the assigned research paper and one or two review articles to provide background on the topic. CR/NCR only (no letter grade). Level: Undergraduate

### **BIOB 468 - Endocrinology. 3 Credits.**

Offered intermittently. Prereq., BIOB 260 and 272. Integration of fundamental concepts of endocrinology (such as hormone release, hormone transport and receptor activation) into complex systems (such as reproduction).

### **BIOB 480 - Conservation Genetics. 3 Credits.**

Offered spring. Prereq., BIOB 272. Genetic basis for solving biological problems in conservation including the genetics of small populations, the application of molecular genetic techniques to conservation biology and case studies of the application of genetics to conservation problems.

### **BIOB 483 - Phylogenics and Evolution. 3 Credits.**

Offered alternating spring semesters. Prereq., BIOB 260 and BIOB 272. Phylogenies, or evolutionary trees, provide insights into the history of life on Earth, including our own origins. This course focuses on the theoretical foundations of popular methods of reconstructing phylogenies from molecular sequence data and how to implement these methods with computational software for real data sets. Other current methods for testing evolutionary hypotheses with sequence data will also be introduced.

### **BIOB 486 - Genomics. 3 Credits.**

Offered autumn. Prereq., BIOB 272. Principles and mechanisms of genome biology of animals and microbes, including genome function, evolution, and basic molecular and computational methodology used in genome biology.

### **BIOB 488 - Programming for Biology. 3 Credits.**

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Offered intermittently. Prereq., BIOB 486 or A- or higher in BIOB 272. An introduction to computer programming using genomic and evolutionary examples. No prior programming experience expected or required.

### **BIOB 490 - Advanced Undergraduate Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **BIOB 491 - Special Topics. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOB 492 - Independent Study. 1-10 Credits.**

Offered every term. Prereq., consent of instr. Independent work under the University omnibus option. See index.

### **BIOB 494 - Seminar in Biology. 1 Credit.**

(R-3) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary.

### **BIOB 495 - Practicum. 1-12 Credits.**

### **BIOB 498 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BIOB 499 - Undergraduate Thesis. 3-6 Credits.**

(R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give oral or poster presentation at the Biological Sciences Undergraduate Research Symposium or a scientific meeting.

### **BIOB 505 - OBE Core Course - Genetics and Evolution. 4 Credits.**

Offered every other autumn. Prereq., graduate standing. Exploration of the fundamental concepts and approaches in evolutionary biology, functional biology and evolutionary genetics with evolutionary ecology woven throughout. Lectures and discussions, with an emphasis on primary literature, classic and contemporary. Level: Graduate

### **BIOB 506 - OBE Core Course - Ecology. 4 Credits.**

Offered alternate years. Prereq., graduate standing. Broad overview of population and community ecology. Lectures and discussions, introducing theoretic foundations and exploring classic and more recent empirical tests of ecological theory with relevant topics in evolutionary ecology and functional biology woven throughout. Level: Graduate

### **BIOB 513 - Community Ecology. 3 Credits.**

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Offered alternate years. Prereq., BIOE 370 or equiv., consent of instr. Current concepts of species interactions, succession, food webs, temporal and spatial patterns and quantitative characterization of community structure. Level: Graduate

### **BIOB 518 - Plant-Consumer Interactions. 3 Credits.**

Offered alternate years. Prereq. BIOE 370 or equiv. Ecology and evolution of plant-consumer interactions. Review of classic and contemporary literature on plant-consumer interactions. Level: Graduate

### **BIOB 522 - Readings in Morphology, Physiology, and Zoology. 1 Credit.**

(R-8) Prereq., graduate standing and consent of instr. Review and discussion of current literature in the fields of morphology, physiology, and ecology. Level: Graduate

### **BIOB 524 - Physiological Plant Ecology. 3 Credits.**

Offered alternate years. Prereq., BIOE 370 and BIOO 433. The physiological basis of plant adaptation and response to the environment. Level: Graduate

### **BIOB 541 - Electron Microscopy Lab. 1-6 Credits.**

(R-6) Prereq. or coreq., BIOB 440 or equiv. Practical laboratory experience in the preparation of various samples and hands-on operation of the transmission and/or scanning electron microscopes. Level: Graduate

### **BIOB 547 - Experimental Molecular, Cellular, and Chemical Biology. 1 Credit.**

(R-8) Offered every term. Prereq., graduate standing or consent of instr. Focus on experimental design, methods, and presentation of experimental results for graduate students in laboratories with a molecular, cellular or chemical biological focus. Level: Graduate

### **BIOB 551 - Environmental Field Study. 1-3 Credits.**

(R-3) Prereq. or coreq., ENSC 540 or ENST 560. Same as ENSC 551. Designing, executing, and interpreting environmental studies. Project oriented. Level: Graduate

### **BIOB 561 - Population Genetics Seminar. 1-2 Credits.**

(R-12) Prereq., consent of instr. or graduate standing. Current topics in population genetics, evolutionary biology, molecular evolution and related topics. Level: Graduate

### **BIOB 565 - Membrane Dynamics Research Seminar. 1 Credit.**

(R-8) Offered every term. Prereq., graduate standing or consent of instr. Focus on experimental design, methods, and presentation of experimental results for students conducting research in membrane cell biology, including membrane trafficking and intracellular signaling. Level: Graduate

### **BIOB 567 - Molecular Analysis of Development. 2 Credits.**

(R-12) Offered alternate spring (UM campus, face-to-face). Prereq. Consent of Instructor. This course covers key topics in developmental biology through the detailed study of the primary literature. Seminar topics are updated for each year the course is offered and listed in syllabus. With help of the instructor, the students present each topic and lead a discussion each class period based on the assigned research paper and one or two review articles to provide background on the topic. CR/NCR only (no letter grade). Level: Graduate

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### **BIOB 594 - Seminar in Biology. 1 Credit.**

(R-6) Prereq., graduate standing or consent of instr. A review and discussion of current research in biology. Topics vary. Level: Graduate

### **BIOB 595 - Special Topics. 1-4 Credits.**

(R-22) Prereq., graduate standing and consent of instr. Experimental offering of new courses by resident or visiting faculty. Level: Graduate

### **BIOB 596 - Independent Study. 1-8 Credits.**

(R-8) Prereq., consent of instr. Credit for independent research project unrelated to thesis or dissertation. Level: Graduate

### **BIOB 597 - Research. 1-8 Credits.**

(R-12) Prereq., consent of instr. Library work involved with preparation of a thesis or dissertation proposal. Level: Graduate

### **BIOB 598 - Internship. 1-8 Credits.**

(R-8) Prereq., consent of the Division, graduate standing. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **BIOB 599 - Thesis. 1-10 Credits.**

(R-10) Prereq., masters student in biology. Field and laboratory research on, and writing of, a student's master's thesis. Level: Graduate

### **BIOB 695 - Special Topics. 10 Credits.**

(R-10) Prereq., graduate standing and consent of instr. Experimental offering of new courses by resident or visiting faculty. Level: Graduate

### **BIOB 699 - Dissertation. 1-10 Credits.**

(R-20) Prereq., doctoral student in biology. Credit for field and laboratory research on, and writing of, a student's doctoral dissertation. Level: Graduate

## Biology-Human (BIOH)

### **BIOH 104N - Basic Human Biology. 3 credits.**

Offered autumn and spring. Missoula College. A one semester course with laboratory focusing on learning scientific principles and a general understanding of human functional anatomy and physiological processes.

Gen Ed Attributes: Natural Science Course (N)

### **BIOH 105N - Basic Human Biology Laboratory. 1 Credit.**

Missoula College. Basic human biology lab is required laboratory for students enrolled in BIOH 104N. Lab activities provide hands-on, investigative instruction in the fundamentals of anatomy and physiology of the human body. Exploration of anatomy using models, preserved materials and demonstrations reinforces principals taught in accompanying lecture.

Ed Attributes: Natural Science Lab Course (N)

### **BIOH 108 - Basic Anatomy. 4 Credits.**

Offered intermittently. Offered at Missoula College. A one semester course with laboratory focusing on learning the scientific principles of anatomy leading to a general understanding of the functional anatomy of the body's architecture and systems.

### **BIOH 112 - Human Form and Function I. 3 Credits.**

Offered autumn. Explores the fundamentals of structure and function at basic cellular and tissue levels, in addition to the anatomy and physiology of the integumentary, musculoskeletal, and nervous systems.

### **BIOH 113 - Human Form and Function II. 3 Credits.**

Offered spring. Explores the fundamental structures and functions of the endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems.

### **BIOH 191 - Special Topics. 1-6 Credits.**

Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOH 201N - Human Anatomy and Physiology I (equivalent to 301). 4 Credits.**

Offered autumn and spring. Offered at Missoula College. Introductory science course or college-prep high school biology course recommended. Comprehensive knowledge of human form and function necessary for students preparing for health-related professions. Emphasis on structure, function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers tissues through nervous system. Required, integrated laboratory includes some dissection. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOH 202N - Human Anatomy and Physiology I Lab. 0 Credits.**



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Offered autumn and spring. Offered at Missoula College. Coreq., BIOH 201N. Required companion laboratory for BIOH 201N. Comprehensive study of tissues and gross human anatomy necessary for students in health-related programs. Emphasis on typical structure and function as they relate to health. Topics include tissues through nervous system. Laboratory activities include some dissection and study of human cadaver. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOH 211N - Human Anatomy and Physiology II (equivalent to 311). 0 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., BIOH 201N/202N. Comprehensive knowledge of human form and function necessary for students in health-related programs. Emphasis on structure function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers endocrine through reproductive systems. Required integrated laboratory includes frequent dissection. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOH 212N - Human Anatomy and Physiology II Lab. 4 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., BIOH 201N/202N. Coreq., BIOH 211N. Required companion laboratory for BIOH 211N. Basic knowledge necessary for students in health-related programs. Emphasis on normal anatomy and physiology with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers endocrine through reproductive systems. A cadaver lab is included. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **BIOH 213N - The Biology of Behavior. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., BIOB 101N. An introduction to the biological basis of human behavior, including neuron function and the roles of hormones, heredity, and environmental influences. Behavioral topics include sensation, learning, emotion, and issues such as obesity, addiction, and stress.

### **BIOH 261 - Human Physiology Lab. 4 Credits.**

Offered autumn based on demand. Offered at Missoula College. Prereq., BIOH 201N/202N, 211N/212N. In-depth exploration of principles and clinical consequences of the physiology of selected human organ systems. Building upon basic concepts covered in BIOH 201N/202N, and 211N/212N, students study membrane functions, neural physiology, nervous system integration, endocrine and peripheral nervous system function and coordination, circulatory, respiratory, renal, digestive, and reproductive physiology.

### **BIOH 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOH 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

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### **BIOH 295 - Student Teaching. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Organized student teaching.

### **BIOH 330 - Anatomy & Physiology Speech Mechanisms. 3 Credits.**

Offered autumn. Introduction to anatomy and physiology of the speech and hearing mechanisms including the anatomical orientation and embryological development, the breathing mechanism, structures of phonation, articulators, audition and the nervous system.

### **BIOH 365 - Human Anatomy and Physiology for Health Professions I. 3 Credits.**

Offered autumn. Prereq., CHMY 121N or CHMY 141N; BIOB 160N or BIOH 112 or 113. Introduction to basic cellular structure and function. The fundamental facts and concepts of the anatomy and physiology of cells and tissues, the integumentary, musculoskeletal, nervous and special senses with an emphasis on clinical application for students preparing for careers in health care. Laboratory component includes presentation of cadaver prosections and models.

### **BIOH 366 - Human Anatomy and Physiology for Health Professions I Laboratory. 1-2 Credits.**

Offered autumn. Prereq., or Coreq., BIOH 365. Laboratory-based instruction in the fundamental facts and concepts of the anatomy and physiology of cells and tissues, the integumentary, musculoskeletal, nervous and special senses with an emphasis on clinical application for students preparing for careers in health care. The laboratory uses cadavers and models.

### **BIOH 370 - Human Anatomy and Physiology for Health Professions II. 3 Credits.**

Offered spring. Prereq., BIOH 365. The fundamental facts and concepts of the anatomy and physiology of the endocrine, circulatory, respiratory, digestive, urinary and reproductive systems with an emphasis on clinical application for students preparing for careers in health care.

### **BIOH 371 - Human Anatomy and Physiology for Health Professions II Laboratory. 1-2 Credits.**

Offered spring. Prereq., or Coreq., BIOH 370. Laboratory-based instruction in the fundamental facts and concepts of the anatomy and physiology of the endocrine, circulatory, respiratory, digestive, urinary and reproductive systems with an emphasis on clinical application for students preparing for careers in health care. The laboratory uses cadaver prosections and models.

### **BIOH 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BIOH 405 - Hematology. 3 Credits.**

Offered autumn. Prereq., BIOM 360 and junior level or consent of instr. This course is intended to introduce the student to normal and pathologic hematology, with emphasis on blood cell development, cellular components, and normal vs. abnormal morphology. Clinical laboratory testing will be presented as a way to diagnose and monitor disease progression. Normal and pathologic coagulation will likewise be addressed.

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Treatment options for disease states will also be covered. Laboratory exercises will instruct the student in proper specimen collection, preparation of peripheral blood smears, microscopic examination of blood smears, and other manual tests associated with blood and coagulation studies.

### **BIOH 423 - TA: Form & Function I. 1-3 Credits.**

(R-4) Offered autumn. Prereq., "A" or "B" in BIOH 112 and 113 and/or one year upper division anatomy and physiology coursework with cadaver lab. Consent of instr. This select group of students teaches regularly scheduled cadaver lab prosection experiences for students enrolled in BIOH 112; assists in preparation and grading of lecture and laboratory visit teaching materials; and assists with proctoring and grading exams of undergraduate students enrolled in BIOH 112.

### **BIOH 424 - TA: Form & Function II. 1-3 Credits.**

(R-4) Offered spring. Prereq., "A" or "B" in BIOH 112 and 113 and/or one year upper division anatomy and physiology coursework with cadaver lab. Consent of instr. This select group of students teaches regularly scheduled cadaver lab prosection experiences for students enrolled in BIOH 113; assists in preparation and grading of lecture and laboratory visit teaching materials; and assists with proctoring and grading exams of undergraduate students enrolled in BIOH 113.

### **BIOH 447 - Genes and Development Lab. 3 Credits.**

Offered spring semester odd years. Prereq., BIOB 260. Recommended: BIOB 272, BIOB 301, BIOB 375. This is a laboratory course that will introduce the students to the tools and methods for investigating how genetic information drives animal development and to using model organisms for studying genes associated with human disease. Students will gain practical experience in experimental design, data collection, results analysis, and scientific communication. Students will perform research independently or in a small group as well as attend formal classroom presentations and discussion. Level: Undergraduate

### **BIOH 461 - Human Anatomy and Physiology I Tutor/Honors. 3 Credits.**

Offered autumn. Prereq., "A" or "B" in BIOH 365 or equiv. and consent of instr. This select group of students performs tutoring for students enrolled in BIOH 365; assists in preparation and grading of lecture and laboratory course teaching materials to undergraduate students enrolled in BIOH 365. Students enrolled in BIOH 461 have the option of co-enrolling in the cadaver dissection course.

### **BIOH 462 - Principles of Medical Physiology. 3 Credits.**

Offered odd autumn semesters. Prereq., WRIT 101 or equivalent, and one intermediate writing course, C (2.00) or better in BIOH 365, 370, and either CHMY 123 or 143N or consent of instr. An advanced course in human physiology for students preparing for careers in health care. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **BIOH 463 - Human Anatomy and Physiology II Tutor/Honors. 3 Credits.**

Offered spring. Prereq., "A" or "B" in BIOH 370 or equiv. and consent of instr. This select group of students performs tutoring for students enrolled in BIOH370; assists in preparation and grading of lecture and laboratory course teaching materials to undergraduate students enrolled in BIOH 370. Students enrolled in BIOH 463 have the option of co-enrolling in the cadaver dissection course.

### **BIOH 470 - Summer Clinical Laboratory. 12 Credits.**

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Offered summer. Prereq., successful completion of medical laboratory science 3+1 on-campus curriculum, admittance into one of our affiliated clinical practicum programs, and consent of instructor. Professional training in clinical laboratory sciences (medical laboratory science).

### **BIOH 471 - Professional Training I. 13 Credits.**

Offered autumn. Prereq., BIOH 470. Continuation of BIOH 470. Professional training at clinical site(s).

### **BIOH 472 - Professional Training II. 12 Credits.**

Offered spring. Prereq., BIOH 471. Continuation of BIOH 471. Professional training at clinical site(s).

### **BIOH 480 - Teaching Anatomy & Physiology I. 3-4 Credits.**

Offered autumn. Prereq., "A" or "B" in BIOH 365 and 370 or equiv. and consent of instr. This select group of students assists in preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOH 365. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOH 112.

### **BIOH 481 - Teaching Anatomy & Physiology II. 3-4 Credits.**

Offered spring. Prereq., "A" or "B" in BIOH 365 and 370 or equiv. and consent of instr. This select group of students assists in the preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOH 370. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOH 113.

### **BIOH 491 - Special Topics. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## Biology-Microbiology (BIOM)

### **BIOM 227 - Vectors and Parasites. 3 Credits.**

Offered autumn. Prereq., college level general biology class is recommended but not required. An introduction to the major groups of parasites and arthropod-borne pathogens infecting humans worldwide. The class will stress the biology, transmission dynamics, prevention and control of these organisms.

### **BIOM 250N - Microbiology for Health Sciences. 3 Credits.**

Offered spring and summer. Infectious diseases, including concepts of virulence, resistance, prevention and control of microbial diseases in the individual and in the community. If laboratory experience is desired, the student may enroll concurrently in BIOM 251. Credit not allowed toward a major in biomicrobiology.

Gen Ed Attributes: Natural Science Course (N)

### **BIOM 251 - Microbiology Health Sciences Lab. 1 Credit.**

Offered spring. Prereq. or coreq., BIOM 250N. Observation of live microorganisms, their characteristics and activities. Experience with microbiological techniques. Credit not allowed toward a major in microbiology.

### **BIOM 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BIOM 360 - General Microbiology. 3 Credits.**

Offered autumn and summer. Prereq., CHMY 123 or 143N; Prereq. or coreq., BIOB 260. Microbial structure and function, growth and reproduction, physiology, ecology, genetics, environmental factors, control of microorganisms and sterility, antimicrobial agents, microbial diversity.

### **BIOM 361 - General Microbiology Lab. 2 Credits.**

Offered autumn. Prereq. or coreq., BIOM 360. Basic microbiology procedures and techniques.

### **BIOM 390 - Undergraduate Research. 1-6 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **BIOM 402 - Medical Bacteriology & Mycology. 3 Credits.**

Offered spring. Prereq., BIOM 360, 361. A study of the pathogenic bacteria and fungi and the diseases they produce.

### **BIOM 403 - Medical Bacteriology & Mycology Lab. 2 Credits.**

Offered spring. Prereq. or coreq., BIOM 402. Laboratory study of pathogenic bacteria and fungi.

### **BIOM 407 - Clinical Diagnosis. 2 Credits.**

Offered spring. Prereq., BIOM 360-361 or BIOH 365/366 or BIOM 402/403 (may concur). Principles of blood chemistry, urinalysis, blood banking, serology and other clinical parameters of disease and health.

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### **BIOM 408 - Clinical Diagnosis Lab. 1 Credit.**

Offered spring. Prereq., or coreq., BIOM 407. Clinical diagnostic methods.

### **BIOM 410 - Microbial Genetics. 3 Credits.**

Offered spring. Prereq., BIOM 360 and 361. The molecular genetics of prokaryotic organisms including: structure and replication of the prokaryotic chromosome; gene expression; mutagenesis and DNA repair; plasmids and other tools of genetic engineering; transmission of genetic material and recombination in prokaryotes; regulation of gene expression in prokaryotes; recombinant DNA and biotechnology.

### **BIOM 411 - Experimental Microbial Genetics Lab. 1 Credit.**

Offered spring. Prereq. or coreq., BIOM 410. Experiments in microbial genetics: Analysis of genes and genomes.

### **BIOM 415 - Microbial Diversity Ecology & Evolution. 3 Credits.**

Offered spring. Prereq., BIOB 260, recommended prereq., or coreq., BIOB 272, BIOM 360. A broad overview of the physiological, phylogenetic and genomic diversity and ecology of microorganisms within a framework of general ecological principles. Focuses on microbial interactions with their environment at the level of the individual, population and community, including intimate associations with plants and animals. Surveys current methods for studying microbial ecology and diversity in the environment. Level: Undergraduate-Graduate

### **BIOM 420 - Host-Microbe Interactions. 3 Credits.**

Offered even spring semesters. Prereq., BIOB 260 and BIOB 272. Many organisms on the planet are hosts that interact with a diversity of microbes. Understanding these interactions is crucial to explain patterns of biodiversity and to improve the quality of human life. This course explores the diversity of host-microbe interactions in nature using the primary scientific literature as our guide. Level: Undergraduate and Graduate

Gen Ed Attributes: Writing Course-Advanced

### **BIOM 427 - General Parasitology. 2 Credits.**

Offered autumn. Prereq., BIOB 272. Parasitism as a biological phenomenon, origin of parasitism, adaptations and life cycles, parasite morphology, fine structure, physiology, parasites and their environment.

### **BIOM 428 - General Parasitology Lab. 2 Credits.**

Offered autumn. Coreq., BIOM 427. Taxonomy, morphology and identification of parasitic protozoa, helminths and arthropods.

### **BIOM 435 - Virology. 3 Credits.**

Offered spring. Prereq., BIOB 260. The general nature of viruses, with emphasis on the molecular biology of animal and human viruses. Co-convenes with BIOM 535. Level: Undergraduate

### **BIOM 450 - Microbial Physiology. 3 Credits.**

Offered autumn. Prereq., BIOM 360-361. Microbial structure and function, physiological diversity, microbial metabolism, role of microbial activity in the environment.

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### **BIOM 451 - Microbial Physiology Lab. 1 Credit.**

Offered autumn. Coreq., BIOM 450. Experimental approaches to analysis of microbial structure, composition and metabolism.

### **BIOM 460 - Ecology of Infectious Diseases. 3 Credits.**

Offered spring. In this course, we will take an ecological approach to understand infectious diseases. We will examine how diseases spread through time and space, and examine mathematical models of disease spread and their usefulness in control strategies. We will discuss case studies of both human and animal diseases, and the ecological concepts that apply to a wide range of systems.

### **BIOM 490 - Advanced Undergraduate Research. 1-10 Credits.**

(R-10) Offered every term. Prereq., BIOM 360, junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **BIOM 491 - Special Topics. 1-10 Credits.**

(R-10) Offered intermittently. Experimental offerings of new courses, experimental offerings of visiting professors, or one-time offerings of current topics.

### **BIOM 494 - Seminar. 1 Credit.**

(R-3) Offered intermittently. Prereq., senior standing in natural sciences. Recent topics in microbiology and related subjects.

### **BIOM 498 - Internship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus.

### **BIOM 499 - Undergraduate Thesis. 3-6 Credits.**

(R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give an oral or poster presentation at the Biological Sciences Undergraduate Research Symposium or a scientific meeting.

### **BIOM 502 - Advanced Immunology. 3 Credits.**

Offered autumn even-numbered years. Advanced topics and immunological techniques used in modern immunology. Level: Graduate

### **BIOM 535 - Advanced Virology. 3 Credits.**

Coreq., BIOB 596. A "principles-based" discussion of virology, focusing on the molecular processes and events that must be completed by all viruses for successful replication within an individual host, and spread through host populations. The molecular basis of alternative replication strategies, the interactions of viruses with hosts organisms, and how these interactions lead to disease will be presented with examples drawn from a representative set of more well-understood animal viruses. BIOM 535 emphasizes independent, creative, critical thought. Co-convenes with BIOM 435. Level: Graduate

### **BIOM 540 - Microbial Pathogenesis. 3 Credits.**

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Offered fall. Prereq., graduate standing. Current concepts in pathogenesis at the molecular and cellular levels. Focus is on microbial (viral, bacterial) and genetic factors leading to disease and the host's involvement in the process. Level: Graduate

### **BIOM 545 - Advanced Topics in Microbial Ecology. 1 Credit.**

(R-4) Offered every term. Prereq., graduate standing or consent of instr. Discussion of selected themes of the ecology of microorganisms with a focus on the recent primary literature. Level: Graduate

### **BIOM 546 - Experimental Microbial Ecology. 1 Credit.**

Offered every term. Prereq., graduate standing or consent of instr. Focus on experimental design, methods, and presentation of experimental results in the area of microbial ecology. Level: Graduate

### **BIOM 570 - Intro to Research. 1 Credit.**

(R-2) Offered autumn and spring. Prereq., graduate standing. Required course for biochemistry and microbiology graduate students. Instruction in basic research techniques, research equipment and reading in the relevant scientific literature. Students conduct research projects under faculty mentors of their choosing. Level: Graduate

### **BIOM 594 - Seminar. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., graduate standing or consent of instr. Same as BCH 594. Presentation of current research in biochemistry and molecular biology by senior graduate students, faculty, and invited outside speakers. Level: Graduate

### **BIOM 595 - Special Topics. 1-3 Credits.**

(R-6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **BIOM 596 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Credit for independent research project unrelated to thesis or dissertation. Level: Graduate

### **BIOM 597 - Research. 1-18 Credits.**

(R-30) Offered intermittently. Prereq., graduate standing, one semester residence. Level: Graduate

### **BIOM 599 - Thesis. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., master's student in microbiology. Laboratory research for and preparation of a master's thesis. Level: Graduate

### **BIOM 699 - Dissertation. 1-20 Credits.**

(R-20) Offered intermittently. Prereq., doctoral student in microbiology. Laboratory research for and preparation of a doctoral dissertation. Level: Graduate



## Biomedical /Pharmaceutical Sci (BMED)

### **BMED 291 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **BMED 545 - Research Lab Rotations in Pharmaceutical Science. 1-3 Credits.**

(R-6) Offered autumn and spring. Experience in research methods in departmental research laboratories. Level: Graduate

### **BMED 581 - Research Seminar in Pharmaceutical Science. 1 Credit.**

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in the pharmaceutical sciences. Level: Graduate

### **BMED 582 - Research Seminar in Neuroscience. 1 Credit.**

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in neuroscience. Level: Graduate

### **BMED 583 - Research Seminar in Toxicology. 1 Credit.**

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in toxicology. Level: Graduate

### **BMED 593 - Current Research Literature. 1 Credit.**

(R-6) Offered autumn and spring. Readings and discussion of current research literature. Level: Graduate

### **BMED 594 - Seminar. 1 Credit.**

(R-6) Offered autumn and spring. Prereq., senior or graduate standing. Level: Graduate

### **BMED 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., senior or graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

### **BMED 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Level: Graduate

### **BMED 597 - Research (MS). 1-9 Credits.**

(R-10) Offered every term. Level: Graduate

### **BMED 599 - Thesis (MS). 1-9 Credits.**

(R-10) Offered every term. Level: Graduate

### **BMED 605 - Biomedical Research Ethics. 1 Credit.**

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Offered spring. Overview of biomedical research ethics and regulations. Topics include ethics and morality in science, scientific integrity, conflicts of interest, human and animal experimentation, intellectual property, plagiarism. Level: Graduate

### **BMED 609 - Biomedical Statistics. 3 Credits.**

Offered autumn. Experimental design and statistical analysis relevant to the biomedical sciences. Level: Graduate

### **BMED 610 - Neuropharmacology. 3 Credits.**

Offered alternate years. Prereq., BMED 613 or 661 or consent of instr. Focus on current areas of research and research technologies in neuropharmacology. Development of presentations and research grant proposals. Level: Graduate

### **BMED 613 - Pharmacology I. 4 Credits.**

Offered autumn. Prereq., BIOC 380 or equiv. Fundamentals of pharmacology and drug action. Level: Graduate

### **BMED 614 - Pharmacology II. 4 Credits.**

Offered spring. Prereq., BMED 613. Fundamentals of pharmacology and drug action. Continuation of BMED 613. Level: Graduate

### **BMED 615 - Molecular Pharmacology. 3 Credits.**

Offered alternate years. Prereq., consent of instr. Focus on the basic theories, principles, and practical implications of receptor pharmacology to quantify drug activity. Major emphasis in pharmacodynamics with some time devoted to related pharmacokinetic parameters. Level: Graduate

### **BMED 620 - Cardiovascular Pharmacology & Toxicology. 3 Credits.**

Offered alternate years. Prereq., BMED 613 or 641, or consent of instr. Recent advances in pharmacology and toxicology of the cardiovascular system. In-depth study of regulatory mechanisms and the effect of immune response and xenobiotics on cardiovascular function. Level: Graduate

### **BMED 621 - Drug Design. 3 Credits.**

Offered alternate years. Prereq., Organic Chemistry and Biochemistry or consent of instr. Introduction to the main concepts in medicinal chemistry, drug design and an overview of new chemical entity preclinical and clinical process. Level: Graduate

### **BMED 622 - Drug Pharmacodynamics. 4 Credits.**

Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Introduction and topical coverage of how drugs form complexes with biological targets to cause an array of responses. Level: Graduate

### **BMED 623 - Drug Diversity. 3 Credits.**

Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Topics in chemogenomics and diversity oriented synthesis will be covered. Level: Graduate

### **BMED 624 - Methods in Medicinal Chemistry. 3 Credits.**

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Offered intermittently. Prereq., Organic chemistry and biochemistry or consent of instr. Novel approaches to small molecule therapeutics for disease targeting. Level: Graduate

### **BMED 625 - Drug Synthesis. 3 Credits.**

Offered intermittently. An introduction to the past and current synthetic approaches and total syntheses of biologically active drugs. Level: Graduate

### **BMED 626 - Research Methods in Biochemical Pharmacology. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Laboratory course intended to familiarize students with the instruments, and expertise of current research techniques in the biomedical sciences. Level: Graduate

### **BMED 627 - Professional Development. 1 Credit.**

Offered autumn and spring. Prereq., Organic Chemistry and Biochemistry or consent of instr. Developmental training in presentations, writing, reviewing, literature research, teaching, research methods, grant writing, ethics, and business aspects in medicinal chemistry. Level: Graduate

### **BMED 628 - Grantsmanship. 1 Credit.**

This course is designed to provide graduate students and postdoctoral fellows with the necessary background, tools and hands on experience to be able to confidently write and submit a research grant. The focus is on preparing a fellowship application although training will be provided for more typical investigator initiated grants. The entire process from conception, preparation, review and revision will be covered. This course will be a requirement for students on training grants. No prerequisites are required. Level: Graduate

### **BMED 630 - Pharmacogenetics. 3 Credits.**

Offered alternate years. Prereq., BIOC 380 or 481. The genetic basis of differential drug activity. Level: Graduate

### **BMED 632 - Advanced Pharmacokinetics. 4 Credits.**

Offered Fall. Recent developments and emerging concepts in theoretical and experimental pharmacokinetics, pharmacogenomics, and drug disposition. Critical analysis of the current literature. Level: Graduate

### **BMED 637 - Topics in Pharmaceutical Sciences and Drug Design. 1 Credit.**

(R-12) Offered autumn and spring. Current topics in the pharmaceutical sciences, including pharmacology, pharmacokinetics, medicinal chemistry, and drug design and development. Level: Graduate

### **BMED 641 - Toxicology I-Principles. 3 Credits.**

Offered autumn. Prereq., BIOC 481 or equiv. Introduction to toxicology. Topics include general principles, risk assessment, organ system toxicology, introduction to carcinogenesis, and genetic toxicology. Level: Graduate

### **BMED 642 - Toxicology II-Agents. 3 Credits.**

Offered spring. Prereq., BMED 641. Toxic agents and the diseases caused by those agents. Includes common toxicants in the environment and occupational settings as well as drug induced toxicity. Level: Graduate

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### **BMED 643 - Cellular & Molecular Toxicology. 3 Credits.**

Offered autumn. Prereq., BMED 641. Cellular and molecular mechanisms of toxicity. Includes apoptosis, regulation of cell cycle, genetic toxicology, and signal transduction pathways in toxicity. Level: Graduate

### **BMED 644 - Immunopharmacology and Immunotoxicology. 3 Credits.**

Offered alternate years. Prereq., MICB 410 or equiv. The impacts of xenobiotic agents on the immune system. Level: Graduate

### **BMED 645 - Respiratory Toxicology. 3 Credits.**

Offered alternate years. Prereq., BMED 641. The lung and associated immune systems and their response to inhaled immunogenic and toxicological agents. Level: Graduate

### **BMED 646 - Neurotoxicology. 3 Credits.**

Offered alternate years. Prereq., BMED 641 or 661. Mechanisms of major neurotoxins and neurological disease. Level: Graduate

### **BMED 647 - Topics in Toxicology. 1-3 Credits.**

(R-9) Offered autumn or spring. Prereq., BMED 613, or 641, or 661. Current topics in toxicology. Level: Graduate

### **BMED 657 - Topics in Immunology. 1-3 Credits.**

(R-9) Offered autumn or spring. Prereq., MICB 410 or equiv. Current topics in immunology. Level: Graduate

### **BMED 661 - Neuroscience I. 4 Credits.**

Offered autumn. Prereq., BIOC 380 or equiv. Overview of the structure and function of the nervous system. Level: Graduate

### **BMED 662 - Neuroscience II. 4 Credits.**

Offered spring. Prereq., BMED 661. Fundamentals of developmental neuroscience, behavioral and cognitive neuroscience and computational neuroscience. Level: Graduate

### **BMED 667 - Topics in Neurobiology. 1-3 Credits.**

(R-9) Offered every year. Prereq., BMED 661. Current topics in neuroscience. Level: Graduate

### **BMED 694 - Seminar. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., senior or graduate standing. Level: Graduate

### **BMED 695 - Special Topics. 4.000 Credits.**

### **BMED 697 - Research (PhD). 1-9 Credits.**

(R-50) Offered every term. Level: Graduate

### **BMED 699 - Dissertation (PhD). 1-9 Credits.**

(R-50) Offered every term. Level: Graduate

## Business Finance (BFIN)

### **BFIN 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BFIN 192 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Course material appropriate to the needs and objectives of the individual student.

### **BFIN 205S - Personal Finance. 3 Credits.**

Offered autumn and spring at Missoula College; intermittently on Mountain Campus. Concepts, strategies and techniques in analyzing financial situations and investment opportunities from the individual's perspective.

Gen Ed Attributes: Social Sciences Course (S)

### **BFIN 267 - Real Estate Theory and Law. 4 Credits.**

Offered intermittently through UM Dept. of Continuing Education. Introduction to the theory and legal issues involved in a real estate transaction.

### **BFIN 292 - Independent Study. 1-3 Credits.**

(R-3) Course material appropriate to the needs and objectives of the individual student.

### **BFIN 298 - Internship. 1-3 Credits.**

(R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BFIN 301 - Analysis of Financial Statements. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business. Analysis of balance sheets, income and cash flow statements and statements of owners' equity in terms of structure, strategy and performance of the company being analyzed. Emphasis is on the use rather than preparation of financial statements.

### **BFIN 322 - Business Finance. 3 Credits.**

Offered every term. Prereq., junior major or minor in Business. The methodology and practice of business financial decisions.

### **BFIN 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BFIN 392 - Independent Study. 1-6 Credits.**

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(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BFIN 394 - Undergraduate Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BFIN 410 - \$50,000 Portfolio. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business, grade of C or better in BFIN 322, and consent of department chair. Students manage a diversified investment portfolio for a semester. Students analyze and discuss investment opportunities and implement their decisions.

### **BFIN 420 - Investments. 3 Credits.**

Offered autumn. Prereq., junior standing in Business, grade of C or better in BFIN 322 or consent of instr. Principles, practices and methodology in investment analysis and portfolio management.

### **BFIN 421 - Real Estate Investment & Analysis. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business and BFIN 322 with a C or better, or consent of instr. Introduction to the principles and practices of real estate. Includes the study of real estate law, financing, valuation, brokerage and land use.

### **BFIN 424 - Markets, Institutions & Financial Engineering. 3 Credits.**

Offered spring. Prereq., junior standing in Business, and BFIN 429 with C- or better or BFIN 439 with C- or better, or consent of instr. Topics covered include operations and analysis of the national and international money and capital markets as they affect financial institutions and usage of derivatives to hedge risks.

### **BFIN 425 - Principles of Financial Analysis. 3 Credits.**

Offered summer. Prereq. admission into certificate of Business and C or better in ACTG 409. Introduction to financial management and the application of these principles to business decisions for non-business majors. Topics include financial analysis, time value of money, theories of risk and return, stock and bond valuation, capital budgeting, cost of capital, and working capital management. Level: Undergraduate

### **BFIN 429 - Financial Management I: Theory and Analysis. 3 Credits.**

Offered spring. Prereq., junior standing in Business, grade of C or better in BFIN 322 and grade of C- or better in ECNS 202S or consent of instr. Understanding the practice of business investment and working capital decisions. Computer models and cases used to demonstrate the management process.

### **BFIN 439 - Financial Management II: Analysis and Problems. 3 Credits.**

Offered autumn. Prereq., junior standing in Business, grade of C or better in BFIN 322 and grade of C- or better in ECNS 202S or consent of instr. Topics include business valuation techniques, capital structure, raising capital, mergers and acquisitions, working capital management, and multinational financial management. Course uses computer models and cases to emphasize analysis and decision making.

### **BFIN 450 - Banking. 3 Credits.**

Offered spring. Prereq., junior standing in Business, grade of C or better in BFIN 322, or consent of instr. The financial management of banking institutions including financial analysis, interest rate risk management, liquidity management, investment and loan portfolio management.

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### **BFIN 473 - Multinational Financial Management. 3 Credits.**

Offered autumn. Prereq., junior standing in Business, BFIN 322 and ECNS 202S, or consent of instr. Students are strongly encouraged to complete BGEN 360 prior to BFIN 473. Topics include financial skills required of corporate executives in international business, exchange rate risk analysis, analysis of global financial systems and assessment of real international investments.

### **BFIN 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BFIN 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BFIN 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BFIN 498 - Internship. 1-3 Credits.**

Offered every term. Prereq., junior standing in Business and consent of instr. Students are placed with private or governmental organizations to receive on-the-job training. Written reports are required. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BFIN 522 - Principles of Financial Analysis. 3 Credits.**

Online course. Offered summer. Prereq., admission to M.B.A. or M-Acct. program or graduate standing with consent of graduate business program director; grade of B or better in ACTG 509. Introduction to financial management and the application of these principles to business decisions. Topics include financial analysis, time value of money, theories of risk and return, stock and bond valuation, capital budgeting, cost of capital, and working capital management. Level: Graduate

### **BFIN 651 - Cornerstone of Graduate Finance. 1 Credit.**

Offered fall. Course is designed to prepare M-Acct. and MBA students who desire an improved foundation in corporate finance. Level: Graduate

### **BFIN 681 - Financial Management. 2 Credits.**

Offered autumn. Prereq., admission to the M.B.A. or admission to the M-Acct. programs. Advanced theory and analysis in corporate financial management. Level: Graduate

### **BFIN 694 - Seminar. 1-15 Credits.**

(R-15) Offered intermittently. Prereq., graduate student in business or consent of business graduate director. Selected topics in finance. Level: Graduate

## Business: General (BGEN)

### **BGEN 105S - Introduction to Business. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Nature of business enterprise; role of business in society; problems confronting business management; career opportunities in business. Open to non-business majors and business majors of freshman or sophomore standing only. Business majors are advised to register for the course their freshman year. Credit allowed for only one of BGEN 105S, MIS 100S, IS 100S, BADM 100S and BUS 103S. Gen Ed Attributes: Social Sciences Course (S).

Gen Ed Attributes: Social Sciences Course (S)

### **BGEN 160S - Issues in Sustainability. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. This literature-intensive course is intended to expose the student to a variety of essays addressing the balance of economic development with the principles of sustainability and social equity. The student is offered an introduction to sustainability concepts, natural systems/cycles and environmental economics. Natural capitalism and triple bottom line maximization is explored, along with the role of corporations and small businesses in sustainable development. A survey of issues surrounding corporate social responsibility and sustainability-driven innovation will be conducted.

Gen Ed Attributes: Social Sciences Course (S)

### **BGEN 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BGEN 215 - Career Readiness. 3 Credits.**

Offered at Missoula College. There will be requirements such as career fairs, employer panels, and career counseling.

### **BGEN 220E - Business Ethics and Social Responsibility. 3 Credits.**

Offered autumn and spring. Focuses on moral judgments, responsibilities to society and their impact on decision making, with particular emphasis on business ethics and values. Addresses organizations and their relationship to the external environment, the law, and various stakeholders.

Gen Ed Attributes: Ethical & Human Values Course

### **BGEN 222 - Business Models and Operations. 3 Credits.**

Offered autumn and spring. Prereq., or Coreq., STAT 216 or SOCI 202 or PSYX 222 or FORS 201. Operations are the activities of a business where products in the form of goods or services are produced. Inputs in the form of material, labor, capital, energy and ideas are transformed by these activities into products to serve the needs of customers. This course will foster understanding into how operations integrate with finance, marketing, management, accounting and management information systems to produce goods and services. This end-to-end conception of a business will focus on different models of the business to achieve this productive integration. Students will learn various means of production, methods of integration with other



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business functions like finance and marketing and explore in depth specific topics like the management of projects, supply chains, inventory and quality. Team projects will be assigned where students develop an integrated production system.

### **BGEN 235 - Business Law. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. This course provides an overview of law as it applies to business transactions. Topics include the nature and source of law; courts and procedure; contracts, sales, and employment; commercial paper; bailment's; property; business organizations; insurance; wills and estate planning; consumer and creditor protection; torts; criminal law; and agency law. Credit not allowed for both BGEN 235 and BADM 257.

### **BGEN 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BGEN 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BGEN 298 - Internship. 1-6 Credits.**

### **BGEN 341 - People, Process, & Technology I. 3 Credits.**

Offered autumn and spring. Prereq. junior standing in business. The course is designed to prepare COB students for the future of work which is characterized by automation, artificial intelligence, technology and innovation, and creative disruptions, and the necessary human mindset and behaviors required to be successful in that environment. Specifically, this course focuses on 1) the process of data-driven decision-making 2) the practice of individual human behaviors influencing the data-driven decision-making 3) to understand how business leaders can leverage people, processes, and technology to facilitate organizational change, and 4) to analyze data and communicate results to business leaders 5) the importance of a growth mindset.

### **BGEN 342 - People, Process, & Technology II. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in business and BGEN 341. This course is the second in the people, process, and technology sequence. Our goals are to explore and develop our understanding of how business leaders can foster an agile organization, identify tools and techniques to effectively lead organizational change, and equip ourselves to be confident, ethical technology users and decision makers.

### **BGEN 360 - International Business. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in Business. Analysis of business in diverse parts of the globe. Examines the impact of socio-economic, political, legal, educational, and cultural factors on management.

### **BGEN 361 - Principles of Business Law. 3 Credits.**

Offered autumn and spring. Prereq., junior major or minor in business. This course examines law as it applies to business transactions. Topics include the nature and sources of law; courts and procedure; contracts, employment; Uniform Commercial Code; property; environmental; business organizations; tort liability;

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insurance; consumer and creditor protection; bankruptcy; criminal law; and agency law. Credit not allowed for more than one of BGEN 235, BGEN 361 and BADM 257.

### **BGEN 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BGEN 445 - Sustainability Reporting. 3 Credits.**

Offered spring. Prereq., junior, senior, or graduate standing. This course provides students with an understanding of sustainability reporting by organizations. Topics covered include sustainability reporting metrics for the public disclosure of the economic, environmental, and social impacts of organizations. Regulation of sustainability reporting, greenwashing, and external assurance of sustainability reports are also covered.

### **BGEN 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BGEN 499 - Strategic Management. 3 Credits.**

Prereq., senior standing in Business, COMX 111A, ECNS 202S, BGEN 220E, BFIN 322, BGEN 361, BGEN 222, BGEN 341, and BMKT 325. Analysis of external and internal firm environment and strategy formulation. Integration of cumulative business knowledge. Case orientation and class discussion.

Gen Ed Attributes: Writing Course-Advanced

## Business: Management (BMGT)

### **BMGT 101S - Introduction to Entertainment Management. 3 Credits.**

Offered autumn and spring. Open to non-business majors. Designed to provide basic distinctions and concepts necessary for understanding various business aspects that underpin the business of entertainment as well as most other businesses, regardless of context.

Gen Ed Attributes: Social Sciences Course (S)

### **BMGT 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMGT 192 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMGT 205 - Professional Business Communication. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 (or higher) or equivalent, COMX 111A. Focuses on understanding the scope and nature of business communication and becoming more fluent and effective writers and speakers in a variety of business situations. Students practice choosing and applying the best communication vehicle and strategy for multiple purposes, audiences, and situations. The course asks students to spend significant time on their own professional writing and presentation skills, and will also survey various contemporary issues in business communication.

Gen Ed Attributes: Writing Course-Intermediate

### **BMGT 212 - Critical Analysis for Business. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., WRIT 101 (or higher) or equivalent. This is an analysis, critical thinking, and writing course for students in the Business Technology fields. Students will also be introduced to traditional Western philosophy through study and discussion of Socrates, Plato and, Aristotle. To that end, students will analyze theories of knowledge and morality in relationship to current events within American Democracy and Law. Students will practice identifying elements of arguments, analyzing elements of arguments for logic, and developing coherent and comprehensive responses to arguments. This course will emphasize practical application rather than purely academic exercise.

Gen Ed Attributes: Writing Course-Intermediate

### **BMGT 235 - Management. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Management theory, research, and the practice of management. Topics covered include leadership styles and techniques, effective communication approaches, time management, decision making, delegation, and the basic functions of supervisory skills.

### **BMGT 242 - Front Line Supervision. 3 Credits.**

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Offered spring. Offered at Missoula College. Introduces basic employee development with emphasis on the responsibilities of a newly-appointed supervisor. Emphasizes organizational structure, motivation, delegation of authority, the hiring process, employee development, employee performance, evaluations, and dealing with employee conflict.

### **BMGT 245 - Customer Service Management. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Designed to prepare employees and managers to meet customers' expectations. Review of customer service philosophy and techniques. Services marketing, quality issues, service design and delivery, customer interaction systems, complaint handling and service recovery, customer relationships, loyalty management, and operations are addressed.

### **BMGT 275 - Venue Management. 3 Credits.**

Offered Autumn. Open to non-business majors. This course is designed to provide some of the basic tools for better understanding the processes involved in the conceptualization, development and production of live-events and successfully managing various types of venues.

### **BMGT 280 - Evolution of the Music Industry: Past, Present, and Future. 3 Credits.**

This course studies the foundation and integral components of the fluid Music Business industry. The course is designed to be very interactive and will cover many of the largest business developments over the last 60 plus years of the Music Industry, resulting in understanding of how the stakeholders, levers for profitability, and success have changed over time and will continue to change in a market dominated by technological innovation and artist evolution.

### **BMGT 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMGT 292 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMGT 298 - Management Internship. 1-3 Credits.**

(R-3) Offered autumn. Offered at Missoula College and on Mountain Campus. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Offered CR/NCR only.

### **BMGT 299 - Capstone: Entrepreneurship. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CAPP 120. An overview of the skill areas and business principles needed to start and operate a small business. Includes developing a business plan, identifying sources of capital formation, managing growth, and marketing issues related to new ventures.

### **BMGT 322 - Operations Management. 3 Credits.**

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Offered every term. Prereq., junior major in Business, CSCI 172. A survey of the processes that organizations, public or private, use to produce goods and services. Includes management science topics.

### **BMGT 329 - Human Resource Management. 3 Credits.**

Offered periodically in the spring. Prereq. junior standing. This course aims to unravel the complexities of human resources within an organization and to help students understand the environment within which HRM occurs. Human Resource topics of selection, training, assessment, and compensation tools and strategies will be addressed heavily in this course.

### **BMGT 340 - Management & Organization Behavior. 3 Credits.**

Offered autumn and spring. Prereq., junior major or minor in Business. An intensive examination of the fundamentals of management and organization supported by the application of behavioral science principles to the management of people in organizations.

### **BMGT 375 - Business of Film & Television. 3 Credits.**

Offered intermittently. Open to non-business majors. The purpose of this class is to gain a basic understanding of the business elements of film and television production. This is done through a semester long project and lectures by visiting television and film professionals.

### **BMGT 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMGT 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq. junior standing in Business and consent of instr.

### **BMGT 394 - Seminar/Workshop. 1-3 Credits.**

(R-3) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BMGT 401 - Event Management. 3 Credits.**

Offered autumn. Prereq., junior standing; open to non-business majors. Students are introduced to skills that are necessary for managing entertainment events. Topics include: market research; artist research; negotiating events; producing live events; and working with community and non-profit organizations. Students will develop and participate in several live events throughout the semester.

### **BMGT 402 - Principles of Entertainment Management I. 3 Credits.**

Offered autumn and spring. Prereq., junior standing and consent of instructor; open to non-business majors. Students are introduced to the fundamental aspects of the entertainment business. Topics include: artist development and management; productions; promotions; and venue management and marketing. Students will produce an artist development plan.

### **BMGT 403 - Principles of Entertainment Management II. 3 Credits.**

Offered spring. Prereq., junior standing; open to non-business majors. Topics include: tour development and marketing; agency relations and responsibilities; and new forms of entertainment media and distribution. Students will produce an event management plan.

**BMGT 410 - Sustainable Business Practices. 3 Credits.**

Offered autumn. Prereq., junior standing. This course explores how changing perceptions around environmental and social issues influence current business practices. Through this exploration, we discuss the impact these influences have on business and how adept firms can gain competitive advantage through embracing and integrating them into their core strategies.

**BMGT 420 - Leadership and Motivation. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in Business and BGEN 341. Study of fundamental concepts, theories, and models of leadership and motivation. Selected topics include: trait and behavioral theories of leadership, charismatic and transformational leadership, power and influence, emotions and justice perceptions in motivation, expectancy and equity theories.

**BMGT 440 - Management & Legal Systems. 3 Credits.**

Offered autumn. Prereq., admission to Certificate in Business. Basic management principles, exploration of concepts such as strategic planning, goal-setting and giving feedback, leadership, motivation, and reward systems. Law as it relates to doing business in the global environment; ethical dimensions of business decision-making for non-business majors. Level: Undergraduate

**BMGT 444 - Management Communications. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in Business; BGEN 341. This course focuses on four modules managing external and internal communications: Communication of Innovations; Communications with Company Leadership; PR Crisis Communications; and Business Negotiations. Course projects include team research, team oral presentations, individual written executive reports, case studies and analysis, and competitive negotiations.

**BMGT 448 - Entrepreneurship. 3 Credits.**

Offered autumn and spring. Focuses on starting and managing a growing business. Topics include recognizing business opportunities, setting strategy for the firm, raising capital, marketing new products, and organizing the managerial team. Students develop a business model canvas and/or write a business plan for themselves or for a local entrepreneur.

**BMGT 458 - Advanced Entrepreneurship. 1-2 Credits.**

(R-3) Offered autumn. Prereq. or coreq, BMGT 448. Focus on managing and marketing a growing business, legal and technology issues for entrepreneurs, and financing new ventures. Students refine an existing or write a new business plan and participate in a business plan competition or write case analyses. UM instructors supervise course content delivered by local and regional experts in entrepreneurship. Four separate one credit weekend seminars are offered.

**BMGT 467 - Global Operations and Supply Chain Management. 3 Credits.**

Offered Spring. Prereq., Junior standing in business, and BGEN 222 and BMKT 325, or consent of instructor. The course introduces students to the challenges and opportunities companies face and how they manage the risk associated with the global supply chain. It provides an overview of global supply chain operations management as a field and describes the strategic role it has in today's intensely competitive business environment.

**BMGT 474 - Entertainment Research & Planning. 3 Credits.**

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Offered intermittently. Prereq., junior standing and consent of instructor; open to non-business majors. This course will provide students with a better understanding of the processes involved in the conceptualization, development, production and or marketing for businesses, particularly entertainment related entities. This is done through a variety of real world projects.

### **BMGT 480 - Cross-Cultural Management. 3 Credits.**

Offered spring. Prereq., junior standing in Business. Study of issues related to cultural diversity within the work force and the problems inherent in the management of a firm's activities on an international scale.

### **BMGT 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMGT 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BMGT 493 - International Experience. 1-6 Credits.**

(R-6) offered intermittently. Prereq., junior standing in business. Field-based, experiential courses that focus on international business topics, incl. the culture and business environment of important U.S. trading partners, such as China, Germany, or Italy.

### **BMGT 494 - Seminar/Workshop. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BMGT 495 - Practicum. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Organized field experience.

### **BMGT 498 - Internship. 1-3 Credits.**

Offered every term. Prereq., junior standing in Business and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BMGT 540 - Management & Legal Systems. 3 Credits.**

Online course. Offered autumn. Prereq., admission to the M.B.A. or M-Acct. programs or graduate standing with consent of graduate business program director. Basic management principles, exploration of concepts such as strategic planning, goal-setting and giving feedback, leadership, motivation, and reward systems. Law as it relates to doing business in the global environment; ethical dimensions of business decision-making. Level: Graduate

### **BMGT 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **BMGT 604 - Competitive Strategy. 1 Credit.**

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Offered autumn. Prereq., admission to the M.B.A. or M.Acct. program. An introduction to strategic management with a focus on the analysis of the firm and its environment as the basis for strategic decision making. Level: Graduate

### **BMGT 640 - Organizational Behavior. 2 Credits.**

Offered autumn. Prereq., admission to the M.B.A. or M-Acct. programs. Professionally oriented strategic overview of intrapersonal, interpersonal, and leadership skills for employees, management, and organizational designers. Topics include diversity, communication, motivation, groups/teams, culture and structure. Level: Graduate

### **BMGT 650 - Business Ethics. 1 Credit.**

BMGT 650-01 and BMGT 650-60 Business Ethics. 1 credit. Offered in the last five weeks of the fall semester. Prerequisites: admission in MBA program.

### **BMGT 665 - Strategic Management Seminar. 1-12 Credits.**

Offered spring. Prereq., admission to the M.B.A. or M-Acct. program and ACTG 605, BFIN 681, BMIS 574, BMGT 604, and BMGT 640; coreq., MBA 603. Analysis of the firm within its industry and the structure of the industry; competitive positioning and competitor analysis; decision-making under conditions of uncertainty; developing a competitive advantage in international markets. Level: Graduate

### **BMGT 685 - International Business. 2 Credits.**

Offered spring. Prereq., admission to the M.B.A. or M-Acct. programs. Review and analysis of international trade theories and institutions, the role of the multinational enterprise (MNE) in global trade and how the MNEs operate in a global setting. Level: Graduate

### **BMGT 696 - Independent Study. 1-9 Credits.**



## Business: Management Information Systems (BMIS)

### **BMIS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMIS 192 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMIS 270 - MIS Foundations for Business. 3 Credits.**

Offered every term. Prereq., WRIT 101. Introduces the development, use, and management of computer-based information systems.

### **BMIS 291 - Special Topics. 1-6 Credits.**

### **BMIS 292 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMIS 298 - Internship. 1-3 Credits.**

(R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BMIS 326 - Introduction to Data Analytics. 3 Credits.**

Offered autumn and spring. Prereq., STAT 216 or SOCI 202 or PSYX 222 or FORS 201. This course introduces the terminology and application of big data and data analytics. Students will complete cases in a variety of disciplines as they become acquainted with some of the software, tools, and techniques of data analytics.

### **BMIS 365 - Business App Development. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in Business. Provides an understanding of algorithm development, programming, computer concepts and the design and application of data and file structures.

### **BMIS 370 - Managing Information and Data. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business. Managing and exploiting organizational data and information. Designing data and information models.

### **BMIS 372 - Information Infrastructures. 3 Credits.**

Offered autumn. Prereq., junior standing in Business. Explores the evolution of technological infrastructures with an emphasis on strategic implications. Students develop an enterprise infrastructure and then examine innovations that allow for the design and development of products and services in a global business environment.

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### **BMIS 373 - Business System Analysis & Design. 3 Credits.**

Offered autumn and spring. Prereq., junior standing in Business. Provides an understanding of the systems development and modification process, including requirements determination, logical design, physical design, test planning, implementation planning and performance evaluation.

### **BMIS 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMIS 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BMIS 394 - Undergraduate Seminar. 1-3 Credits.**

(R-3) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BMIS 441 - Systems and Operations. 3 Credits.**

Offered summer. Prereq., admission into certificate of Business. Introduction to management information systems and the impact on modern organizations and society for non-business majors. Topics include globalization, new industrial revolution, infrastructure, security, privacy, basic coding, and innovation. Co-convenes with BMIS 541. Level: Undergraduate

### **BMIS 465 - Introduction to Real-time Data Analytics. 3 Credits.**

Offered intermittently. Prereq., STAT 216, BMIS 326 or equivalents. Focuses on analyzing big data in motion using commercially available software.

### **BMIS 471 - Fundamentals of Network & Security Management. 3 Credits.**

Offered intermittently. Prereq., junior standing. Current topics will focus on the impact of network technologies and infrastructures on facilitating and supporting business organizations. Students learn about design, installation, and configuration of networks as well as implementing security, networking protocols, and virtualization technologies. Includes a hands-on lab to demonstrate the concepts.

### **BMIS 472 - Advanced Network & Security Management. 3 Credits.**

Offered intermittently. Prereq., junior standing and BMIS 471. Focuses on network security and how it aligns with organizational strategy, directory services for access to organizational information, and cybersecurity management. Includes a hands-on lab to demonstrate the concepts.

### **BMIS 476 - Integrated Project Management for IS. 3 Credits.**

Offered every term Prereq., junior standing in Business and BMIS 326, 365, and 373. Emphasis on project planning, team selection models, and project management techniques. A software package is used to demonstrate how projects are planned, managed, monitored, and controlled. MIS majors should enroll in this course.

### **BMIS 478 - E Commerce: a Managerial Perspective. 3 Credits.**

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Offered intermittently. Prereq., junior standing in Business. Focuses on the capabilities of the Internet to support and enable commerce. Provides a managerial perspective on topics including effective web site design, emerging technologies, business models, infrastructure architectures, and security.

### **BMIS 479 - Introduction to Consulting. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business. Managerial approach to consulting engagements. Includes scoping and writing proposals, presenting to clients, documenting consulting work, and interpersonal skills necessary for successful consulting. Course does not require a technical background. Level: Undergraduate

### **BMIS 482 - Big Data Project. 3 Credits.**

Offered autumn and spring. Prereq., BMIS 326 and any 2 electives listed in part 4 of the Big Data Analytics Certificate, or consent of instructor. Students will work in cross-disciplinary teams to complete big data projects from different disciplines. There will be emphasis on agile project management. MIS majors are excluded from this course and should take BMIS 476.

### **BMIS 491 - Special Topics. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMIS 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BMIS 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BMIS 495 - Practicum: Information Systems. 3 Credits.**

Offered every term. Prereq., junior standing in Business and consent of instr. Practical hands-on experience with area organizations. Provides application of classroom learning.

### **BMIS 498 - Internship. 1-3 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BMIS 541 - Systems & Operations. 3 Credits.**

Online course. Offered spring. Prereq., admission to M.B.A. or M-Acct. program or graduate standing with consent of graduate business program director. Design and use of information systems to meet the tactical and strategic needs of an enterprise, particularly within the operations function. Topics include systems analysis, data and process modeling, database designs, manufacturing planning and control, forecasting, and quality management. Level: Graduate

### **BMIS 575 - Fundamentals of Consulting. 3 Credits.**

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Offered spring. Prereq., graduate standing in Business. The technical, interpersonal, and consulting skills necessary to effectively work with clients. Focuses on management; does not require a technical background. Level: Graduate

### **BMIS 591 - Special Topics. 1-3 Credits.**

(R-3) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **BMIS 601 - Business Intelligence. 3 Credits.**

Prereq., A combination of BMKT 325 and STAT 216 or BMKT 560 as well as BMIS 326 and M 451 and graduate level standing or consent of instructor. The course provides graduate students with the foundational knowledge necessary to transform big data into useful business intelligence. Students get the skills, tools, and techniques required to collect, synthesize, and distribute information to support intelligent decision-making at the managerial level. Level: Graduate

### **BMIS 625 - Mining of Text & Unstructured Data. 3 Credits.**

Prereq., A combination of BMKT 325 and STAT 216 or BMKT 560 as well as BMIS 326 and M 451 and graduate level standing or consent of instructor. An integration of Data Science theory and the actual practice of searching, sorting, relating, and deriving results from textual data. Students will be exposed to machine learning, natural language processing, as well as other computer assisted data mining techniques and then gain hands-on proficiency in the practice of data science using the software from data mining and document analysis vendors. Level: Graduate

### **BMIS 650 - Quantitative Analysis. 2 Credits.**

Offered spring. Prereq., admission to the M.B.A. or M-Acct. programs. Quantitative methods supporting managerial decision-making. Theory and logic underlying such methods as linear programming and simulation. Solution of complex problems and practice of interpersonal skills in team projects. Level: Graduate

### **BMIS 674 - Management of Information Systems. 2 Credits.**

Offered autumn. Prereq., admission to the M.B.A. or M-Acct. program. The tactical/operational responsibilities and roles of the CIO. Includes governance issues, supporting the learning organization, managing the technologies, and managing the development of systems. Focuses on management; does not require a technical background. Level: Graduate

### **BMIS 694 - Seminar. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Level: Graduate

### **BMIS 696 - Independent Study. 1-9 Credits.**

## Business: Marketing (BMKT)

### **BMKT 109 - Visual Merchandising & Display. 3 Credits.**

Offered spring. Offered at Missoula College. Introduction to various techniques used by retailers in the merchandising and displaying of goods. Analysis of different approaches and methods for effectiveness in actual retail settings. Includes display principles of balance, color, and focal point statements.

### **BMKT 112 - Applied Sales. 3 Credits.**

Offered autumn. Offered at Missoula College. Course provides students with basic sales skills through the use of experiential training, role-playing and evaluating presentations. Includes the steps in prospecting, opening, presenting, demonstrating, handling objections, and closing the sale. Students will gain experience through role-playing activities, observations, and written presentations.

### **BMKT 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMKT 192 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMKT 225 - Marketing. 3 Credits.**

Offered autumn. Offered at Missoula College. An overview of marketing activities including the consumer buying decision process, distribution channels, the planning process, and new marketing trends. Students learn how to introduce a new product into the market place, target markets, and promote products through advertising and package design.

### **BMKT 240 - Advertising. 3 Credits.**

Offered spring. Offered at Missoula College. Exposure to the history and fundamentals of advertising; in-depth exploration of advertising media, budget plans, ad campaign designs, and in-house promotion designs; and the production of actual radio, television, and print advertising.

### **BMKT 265 - Social Media Strategy & Management. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CAPP 120 or CSCI 105. Students will analyze and select appropriate communication channels and technologies according to relevant publics, evaluate suitability of media content and use best communication practices to promote a positive organizational image, and apply business relationship marketing techniques to enhance social communities. Students will monitor issues and analyze trends across various social media platforms and manage media through professional, accessible, and ethical practices expected in our global society.

### **BMKT 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMKT 292 - Independent Study. 1-3 Credits.**

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(R-3) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **BMKT 298 - Internship. 1-3 Credits.**

(R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BMKT 325 - Principles of Marketing. 3 Credits.**

Offered autumn and spring. Prereq., junior major or minor in Business. The marketing environment, product, price, distribution, and promotion strategies including government regulation and marketing ethics.

### **BMKT 337 - Consumer Behavior. 3 Credits.**

Offered spring. Prereq., junior standing in Business and BMKT 325; PSYX 100S and PSYX 230S recommended. A behavioral analysis of consumer decision making and of the factors influencing consumer decisions, i.e., those decisions directly involved with the obtaining of economic goods and services.

### **BMKT 342 - Marketing Research. 3 Credits.**

Offered autumn. Prereq., junior standing in Business, BMKT 325. Emphasis on data acquisition and analysis for improved decision making in marketing. Topics include problem definition; secondary data; primary data via observation, interrogation and experimentation; data analysis; written and oral reports. May include field project.

### **BMKT 343 - Integrated Marketing Communication. 3 Credits.**

Offered autumn. Prereq., junior standing in Business, BMKT 325. An integrated course in promotion strategy. Topics include advertising message design, media selection, promotions, public relations, personal selling, and other selected topics.

### **BMKT 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMKT 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BMKT 412 - Non Profit Marketing. 3 Credits.**

Offered intermittently. Prereq., junior standing in Business and BMKT 325. Integration of core concepts of marketing into philanthropic and other nonprofit organizations. Includes strategies for large-scale enterprises such as unions, educational and religious institutions to small organizations that provide local support such as cultural services, human and environmental services. Student work with nonprofit organizations creating marketing communications plans in an experiential learning environment.

### **BMKT 413 - Sports Marketing. 3 Credits.**

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Offered intermittently. Prereq., junior standing. Examines the marketing of sports products and non-sports products using sports as a platform. Topics include the use of traditional marketing strategies as well as the use of sponsorship strategies including endorsements, venue naming rights, and licensing.

### **BMKT 420 - Integrated Online Marketing. 3 Credits.**

Offered autumn or spring. Prereq., junior standing in business, BMKT 325. Exploration and application of marketing communications principles to the internet environment. Students develop individual WordPress websites/blogs, learn about online marketing techniques, and complete online marketing and social media projects.

### **BMKT 440 - Marketing Analytics. 3 Credits.**

Offered spring. Prereq., BMKT 325; junior standing in Business or consent of instr. The purpose of this course is to learn about the importance and value of using new measurement tools in marketing and using related research and data to create compelling content. Students in this course are also challenged to bring actual ideas to life.

### **BMKT 445 - Marketing & Stats . 3 Credits.**

Offered autumn. Prereq., admission to the Certificate in Business. Introduction to marketing principles to create long-term competitive advantage for an organization. Topics include environmental analysis, marketing planning, segmentation analysis, target marketing, and planning for product, price, promotion and distribution. Business statistics covered including t-tests, analysis of variance, regression and correlation analysis; statistics applications in context of marketing research and marketing problems. Level: Undergraduate

### **BMKT 460 - Marketing Hi-Tech Products & Innovation. 3 Credits.**

Offered autumn. Prereq., BMKT 325; junior standing in Business or consent of instr. Exploration of concepts and practices related to marketing in fast-paced environment; draws from a range and diversity of industries and contexts including the Internet.

### **BMKT 480 - Marketing Management. 3 Credits.**

Offered intermittently. Prereq., senior standing in Business; BMKT 325, 337, 342, 343. Case analysis in marketing management.

### **BMKT 482 - Telling Stories with Data. 3 Credits.**

Prereq., junior or senior standing. This course explores how we turn data into stories that can be understood by a nontechnical audience. Students will work with both raw and summarized data from several industries.

### **BMKT 490 - Undergraduate Research. 3 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business, BMKT 325. An experiential course in the strategy, research, and execution of an integrated marketing communications plan. Students' work culminates in the American Association of Advertisings National Student Advertising Competition.

### **BMKT 491 - Special Topics. 1-6 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **BMKT 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

### **BMKT 493 - International Experience. 1-6 Credits.**

(R-6) offered intermittently. Prereq., junior standing in business. Field-based, experiential courses that focus on international business topics, incl. the culture and business environment of important U.S. trading partners, such as China, Germany, or Italy.

### **BMKT 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

### **BMKT 498 - Internship. 1-3 Credits.**

Offered every term. Prereq., junior standing and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **BMKT 560 - Marketing & Statistics. 3 Credits.**

Online course. Offered autumn. Prereq., admission to the M.B.A. or M-Acct. programs or graduate standing with consent of graduate business program director. Introduction to marketing principles to create long-term competitive advantage for an organization. Topics include environmental analysis, marketing planning, segmentation analysis, target marketing, and planning for product, price, promotion and distribution. Business statistics covered including t-tests, analysis of variance, regression and correlation analysis; statistics applications in context of marketing research and marketing problems. Level: Graduate

### **BMKT 591 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **BMKT 642 - Advanced Marketing Research. 3 Credits.**

Prereq., A combination of BMKT 325 and STAT 216 or BMKT 560 as well as BMIS 326 and M 451 and graduate level standing or consent of instructor. The purpose of the course is to learn how to provide information for better business decision making. Students study the different aspects of marketing research as it relates to business problems and develop a mindset that continually relies on information-based decisions. Level: Graduate

### **BMKT 660 - Marketing Management. 2 Credits.**

Offered spring. Prereq., admission to the M.B.A. or M-Acct. programs. Marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations. Level: Graduate

### **BMKT 670 - Applied Data Analytics. 3 Credits.**

Prereq., A combination of BMKT 325 and STAT 216 or BMKT 560 as well as BMIS 326 and M 451 and graduate level standing or consent of instructor. This course applies statistical skills and technical expertise to real-world big-data business applications. Students will work with the tools of data science and hone their ability



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to answer business questions through the analysis of data. Level: Graduate

### **BMKT 680 - Big Data and Innovation. 3 Credits.**

Prereq., BMKT 670, BMKT 642, BMIS 625. The course focuses on the role of data in organizational innovation. It explores both the tension between data and creativity, as well as challenges that inhibit the ability of organizations to effectively harness the power of advanced analytics to unleash new insights and deliver value. In addition to ensuring proficiency in strategy, customer value and insights, the class will also address privacy regulations and considerations. Level: Graduate

### **BMKT 694 - Seminar. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Level: Graduate

### **BMKT 699 - Capstone. 3 Credits.**

Prereq., BMKT 642, BMKT 670, and BMIS 625. Coreq., BMIS 601, BMKT 680, BMIS 650 or director consent. Graduate level standing. Using a project-based approach, the course enables students to synthesize domain knowledge, apply their technical skills, and convey results of their data analysis through data visualizations and clear written and oral communication skills to achieve an integrative perspective of business analytics.

## Chemical Addiction Studies (CAS)

### **CAS 140X - Addictions and Diversity. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. This course required for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. Introduction to multicultural competencies where students will be exposed to the fundamentals of working with substance abusing and dependent individuals from the cultural impact of race, nationality, gender, age, sexual orientation, religion, and socio-economic status on the development and progression of alcohol/drug problems. Appropriate for students of Social Work, Psychology, community health, Business and Counseling students, Education, and those with an interest in diversity and addictions.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **CAS 185 - Prevention Practices. 3 Credits.**

Offered intermittently. Offered at Missoula College. This course required for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. The course introduces strategies for environmental prevention that focus on altering and improving the environment by changing social norms or attitudes, controlling the availability of illicit drugs or alcohol, or strengthening enforcement of laws and regulations. Risk and Protective Theory will be outlined, as well as the five categories of environmental strategies. This course is appropriate for everyone who has or will have a role in prevention, education, community health, and/or community change. Required for Chemical Addiction Studies students. May also be appropriate for students of social work, psychology, sociology, community health or those with an interest in learning about alcohol and drug prevention in society.

### **CAS 191 - Special Topics. 3 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CAS 192 - Independent Study. 1-6 Credits.**

(R-6). Course material appropriate to the needs and objectives of the individual student.

### **CAS 195 - Field Work/Clinical/Practicum. 1-3 Credits.**

(R-3) Offered autumn and spring. Offered at Missoula College. Prereq., CAS 185 and CAS 242 and consent of instructor. This field work placement focuses on PREVENTION and is created to provide Chemical Addiction Studies students with direct experience working in community organizations where they will create and implement alcohol and drug prevention activities. May also be appropriate for students of Social Work, Psychology, Sociology, Community Health or those with an interest in learning about prevention practices with direct experience in community organizations.

### **CAS 201 - Theories of Counseling. 3 Credits.**

Offered spring. Offered at Missoula College. This is an entry level survey course of various approaches to counseling and psychotherapy and is a required course by the state of Montana for Addiction Counselor Licensure. The course is a mixture of lecture, discussion, experiential learning, demonstrations, role playing,

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viewing counseling sessions, and practice of the major contemporary models of counseling. Ethical and professional issues are also addressed.

### **CAS 210 - Individual Counseling. 3 Credits.**

Offered intermittently. Offered at Missoula College. Prereq., CAS 201 and CAS 242. This course is intended for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. Major theories and practice of individual counseling for the client with substance abusing or chemically dependent behavior is presented.

### **CAS 225 - Group Counseling. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CAS 201. This course is intended for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. Major theories and practice of counseling for the client with substance abusing or chemically dependent behavior in group settings. Includes comprehensive group approaches, family therapy and other appropriate group strategies. Includes group dynamics and strategies to managing group sessions.

### **CAS 231N - Pharmacology and Addictions. 3 Credits.**

Offered autumn semester through Missoula College. This course will provide students with an understanding of the pharmacology involved in addiction, with emphasis on addiction behavior and counseling.

Gen Ed Attributes: Natural Science Course (N)

### **CAS 242 - Fundamentals of Substance Abuse and Addiction. 3 Credits.**

Offered autumn. Offered at Missoula College. This course is offered intermittently for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. May also be appropriate for Students of Social Work, Psychology, Sociology, or Community Health.

### **CAS 243 - Substance Abuse Counseling I. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CAS 242 and consent of instr. This course is required for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. This course is created to provide students specific knowledge regarding the theories, research, and evidenced-based literature in the provision of addiction counseling services. Students will be introduced to the overall scope of the problems of addictions, professional characteristics and principles of addiction counselors, ethical and legal responsibilities of professional behavior, addiction counseling skills and competencies required to be addiction counselors.

### **CAS 248 - Substance Abuse Counseling II. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CAS 242 and consent of instr. This course is required for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. Meets specific State of Montana educational requirements associated with individual and group counseling for addiction, as well as ethics for addiction counselors. The course requires the student to draw upon the resources provided by experts. The course work significant amount of experiential application and counseling practice techniques.

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### **CAS 252 - Gambling and Gaming Disorders in Addiction Counseling. 2 Credits.**

Offered autumn at Missoula College. This course is part of a suite of courses leading to an associate degree with a focus in Addiction Studies.

### **CAS 254 - Co-Occurring Disorders-Assessment & Treatment Planning. 2 Credits.**

Offered spring. Introduces students to Substance Use Disorders and co-occurring mental illness. Students will learn treatment protocols, and will learn how to work with individuals experiencing addiction and also have some other mental health issues. This is a course that is part of a suite of courses that students can take to qualify for application to the Board of Behavioral Health for their ACLC (Addiction Counselor License Candidacy).

### **CAS 260 - Addiction Assessment/Documentation/Treatment Planning. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CAS 242 and consent of instr. This course is required for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. Intended to provide a comprehensive education to meet State of Montana education requirements for Licensure in Addiction Counseling. Students will be trained in clinical assessment diagnosis, treatment planning and patient record documentation with the client who has substance use disorders. Students will complete experiential application of the materials.

### **CAS 261 - Advanced Addiction Assessment/Treatment Planning and Documentation. 3 Credits.**

Offered spring. Prereq., or coreq. CAS 260 or consent of instructor. Course is Face-to-Face seminar format and includes lecture, group work, applied activities, and written demonstration of addiction assessment skills; including addiction treatment planning & documentation. There is online supplementation. It is designed to provide Advanced Assessment, Treatment Planning and Documentation education to those wishing to apply to become a Licensed Addiction Counselor.

### **CAS 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CAS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CAS 295 - Field Work/Clinical/Practicum. 1-4 Credits.**

(R-4) Offered autumn and spring. Offered at Missoula College. Prereq., CAS 242. This course is offered for students seeking to obtain their AA degree in Chemical and Addiction Studies and who wish to become Licensed Addiction Counselors in the State of Montana. This Field Work Placement focuses on addiction treatment and counseling activities. The student will work in the community under the supervision of an addiction treatment professional and be given the opportunity to witness and participate in alcohol and drug treatment counseling activities.

## Chemistry (CHMY)

### **CHMY 104 - Preparation for Chemistry. 4 Credits.**

Offered autumn. Prereq. ALEKS Level 3, M01-Maplesoft Arithmetic score  $\geq 16$ , M02-Maplesoft Algebra score  $\geq 14$  or M 090 Introductory Algebra w/RC+ or better. An introduction to concepts and calculations in chemistry that provides preparation for CHMY 141N. Not appropriate toward chemistry requirement in any major.

### **CHMY 121N - Introduction to General Chemistry. 4 Credits.**

Offered autumn and spring. First semester of an introduction to general, inorganic, organic and biological chemistry. The course consists of three 1-hour face-to-face lectures per week plus a 1-hour integrated recitation each week.

Gen Ed Attributes: Natural Science Course (N)

### **CHMY 122 - Introduction to General Chemistry Lab. 1 Credit.**

Offered autumn and spring. Prereq., Enrolled in the Missoula College Nursing program. Prereq. or coreq., CHMY 121N or equivalent. A laboratory course emphasizing inorganic chemistry, quantitative relations and synthesis of inorganic and organic compounds.

### **CHMY 123 - Introduction to Organic and Biochemistry. 4 Credits.**

Offered autumn and spring. Prereq., "C-" or equiv. in CHMY 121N or CHMY 141N or consent of instr. Second semester of an introduction to general, inorganic, organic and biological chemistry.

### **CHMY 124 - Introduction to Organic and Biochemistry Lab. 2 Credits.**

Offered autumn and spring. Prereq. or coreq., CHMY 123. Laboratory to accompany CHMY 123.

### **CHMY 141N - College Chemistry I. 4 Credits.**

Offered autumn and spring. Prereq., ALEKS Placement Level 4, M02-Maplesoft Algebra score  $\geq 14$  or M 095 Intermediate Algebra w/ RC+ or better and Chemistry Placement Exam score  $\geq 13$  or CHMY 104 w/C- or better. Coreq. or Prereq., CHMY 142N. For science majors and other students intending to take more than one year of chemistry. Properties of elements, inorganic compounds, liquid solutions, chemical equilibria and chemical kinetics.

Gen Ed Attributes: Natural Science Course (N)

### **CHMY 142N - College Chemistry I Lab. 1 Credit.**

Offered Autumn and Spring. Prereq., or Coreq., CHMY 141N. Use of experimental methodologies, scientific questioning and hypothesis driven guided inquiry experiments to explore and understand important fundamental chemical and laboratory concepts including stoichiometry, measurements, molecular structure, and thermodynamics. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **CHMY 143N - College Chemistry II. 4 Credits.**

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Offered spring and summer. Prereq., "C-" or better in CHMY 141N or consent of instr. Prereq., or Coreq., CHMY 144N. A continuation of CHMY 141N.

Gen Ed Attributes: Natural Science Course (N)

### **CHMY 144N - College Chemistry II Lab. 1 Credit.**

Offered spring and summer. Prereq., or Coreq., CHMY 143N. Continuation of CHMY 142N. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **CHMY 191 - Special Topics/Experimental Course. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHMY 192 - Independent Study. 1-10 Credits.**

### **CHMY 195 - Student Teaching. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Organized student teaching.

### **CHMY 221 - Organic Chemistry I. 3 Credits.**

Offered autumn. Prereq., CHMY 123N or 143N. The chemical and physical properties of organic compounds.

### **CHMY 222 - Organic Chemistry I Lab. 2 Credits.**

Offered autumn. Coreq., CHMY 221; prereq., one semester of 100-level laboratory. Microscale techniques are emphasized.

### **CHMY 223 - Organic Chemistry II. 3 Credits.**

Offered spring. Prereq., CHMY 221. Continuation of 221.

### **CHMY 224 - Organic Chemistry II Lab. 2.000 Credits.**

Offered spring. Prereq., CHMY 222; prereq. or coreq., CHMY 223.

### **CHMY 290 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHMY 291 - Special Topics/Experimental Course. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHMY 292 - Independent Study. 1-10 Credits.**

(R-10) Offered autumn and spring. Prereq., one semester of chemistry and consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

### **CHMY 294 - Seminar/Workshop. 1-3 Credits.**

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(R-6) Offered intermittently. Topic varies.

### **CHMY 305E - Ethics, Literature, and Writing in the Sciences. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course and CHMY 223 and chemistry or biochemistry majors. Practicum for developing and improving skills in scientific writing and evaluation. Presentation, discussion and written evaluations of standard ethics traditions and ethical issues related to the professional practice of science. Use of library and search tools to access current literature in chemistry.

Gen Ed Attributes: Ethical & Human Values Course, Writing Course-Advanced

### **CHMY 311 - Analytical Chemistry-Quantitative Analysis. 4 Credits.**

Offered autumn. Prereq., one year of college chemistry, including laboratory. Classroom and laboratory work in gravimetric, volumetric, colorimetric and electrochemical methods of analysis; theory of errors; ionic equilibria in aqueous solutions.

### **CHMY 313 - Introduction to Brewing. 1 Credit.**

Offered autumn. Prereq., CHMY 123 and BIOB 160N. Introduction and review of chemistry, biochemistry and microbiology fundamentals needed to complete CHMY 314 Brewing Science.

### **CHMY 314- Brewing Science. 3 Credits.**

Offered autumn. Prereq., CHMY 313 or BIOM 360, CHMY 311, and BCH 380 or BCH 480. Advanced malting and brewing chemistry, biochemistry and microbiology, including lecture, laboratory, and practical components.

### **CHMY 360 - Applied Physical Chemistry. 3 Credits.**

Prereq., CHMY 123 OR 143 AND M 162. Basic thermodynamics and chemical kinetics with applications in the biological and environmental sciences. Credit not allowed for both 360 and 373.

### **CHMY 371 - Physical Chemistry-Quantum Chemistry & Spectroscopy. 4 Credits.**

Offered spring. Prereq., CHMY 373. Systematic treatment of the laws and theories relating to chemical phenomena.

### **CHMY 373 - Physical Chemistry-Kinetics & Thermodynamics. 4 Credits.**

Offered autumn. Prereq., CHMY 143N, M 172, and PHSX 217N. Systematic treatment of the laws and theories relating to chemical phenomena.

### **CHMY 390 - Undergraduate Research. 1 Credit.**

Offered every term. Prereq., CHEM 161N-162N with B or better and consent of instr. Methods of peer-led team learning as applied to general chemistry instruction. Review of concepts from general chemistry. Student leaders mentor a team of general chemistry students in working toward constructing chemistry knowledge and developing problem-solving skills.

### **CHMY 391 - Special Topics/Experimental Course. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHMY 392 - Independent Study. 1-9 Credits.**

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(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHMY 397 - Teaching Chemistry. 1 Credit.**

Offered every term. Prereq., CHMY 141N-143N with B or better and consent of instr. Methods of peer-led team learning as applied to general chemistry instruction. Review of concepts from general chemistry. Student leaders mentor a team of general chemistry students in working toward constructing chemistry knowledge and developing problem-solving skills.

### **CHMY 398 - Internship/Cooperative Education. 1-6 Credits.**

Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **CHMY 401 - Advanced Inorganic Chemistry. 3 Credits.**

Offered autumn. Prereq., CHMY 223. Theory and principles of inorganic chemistry and a systematic coverage of descriptive inorganic chemistry in the context of the periodic table. Level: Undergraduate-Graduate

### **CHMY 402 - Advanced Inorganic Chemistry Lab. 2 Credits.**

Offered spring. Prereq., CHMY 224 AND 360 or 373 and consent of instr. Preparation of inorganic and coordination compounds. Isolation and characterization by ion exchange, column chromatography, IR, UV-VIS, derivatives, MP, and BP. Level: Undergraduate-Graduate

### **CHMY 403 - Descriptive Inorganic Chemistry. 3 Credits.**

Prereq., CHMY 221-222, 360 or 373-371, and 401. A survey of the chemistry of the elements including transition metal reaction mechanisms, redox chemistry, organometallic chemistry, bioinorganic chemistry. Level: Undergraduate

### **CHMY 411 - Advanced Organic Chemistry. 3 Credits.**

Offered intermittently. Prereqs., CHMY221 and CHMY223 (the sophomore organic chemistry sequence). The course is study of organic chemistry which covers chemoinformatics, structure and conformation, acid-base properties, kinetics/thermodynamics, mechanisms and reactivity, and synthetic strategy and key reactions. Level: Undergraduate-Graduate

### **CHMY 421 - Advanced Instrument Analysis. 4 Credits.**

Offered spring. Prereq., CHMY 311. Theory and use of instrumental methods in the study of analytical and physical chemistry. Level: Undergraduate-Graduate

### **CHMY 442 - Aquatic Chemistry. 3 Credits.**

Offered autumn odd-numbered years. Prereq., CHMY 311 or consent of instr. Application of chemical equilibria theory for understanding and modeling chemical processes in natural waters with an emphasis on spreadsheet computations. In depth examination of concepts such as pH, alkalinity, buffering, and solubility as they apply to natural waters. Level: Undergraduate-Graduate

### **CHMY 465 - Organic Spectroscopy. 3 Credits.**



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Offered intermittently. Prereq., one year of organic chemistry or consent of instr. Theory and interpretation of the NMR, IR, UV, and mass spectra of organic compounds with the goal of structure identification. Enrollment is capped at 16 for this course. Level: Undergraduate-Graduate

### **CHMY 466 - FT-NMR Option for Undergraduate Research. 1 Credit.**

Offered intermittently. Prereq., CHMY 221-222; research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy. Level: Undergraduate

### **CHMY 485 - Laboratory Safety. 1 Credit.**

Offered autumn. Prereq., one year of college chemistry. This course is for students who plan to teach high school and middle school science. Legal responsibilities of teachers, awareness of laboratory hazards and how to manage those hazards, resources for information regarding laboratory hazards. Level: Undergraduate-Graduate

### **CHMY 488 - Forensic Research. 3 Credits.**

Offered autumn, spring and summer. Prereq., consent of instr. Laboratory investigations and research on forensic chemistry topics under the direction of a faculty member. Level: Undergraduate

### **CHMY 489 - Forensic Research Seminar. 1 Credit.**

Offered autumn. Prereq., CHMY 421 and ANTH 286N. Seminar speakers on forensic science topics in the areas of ethics, law, anthropology and criminology; tours of the Montana State Crime Laboratory. Level: Undergraduate

### **CHMY 490 - Undergraduate Research. 1-9 Credits.**

(R-9) Offered autumn, spring, and summer. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member. Level: Undergraduate

### **CHMY 491 - Special Topics/Experimental Course. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics. Level: Undergraduate-Graduate

### **CHMY 492 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member. Level: Undergraduate-Graduate

### **CHMY 494 - Seminar/Workshop. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member. Level: Undergraduate-Graduate

### **CHMY 498 - Internship/Cooperative Education. 1-6 Credits.**

Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate

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### **CHMY 499 - Senior Thesis/Capstone. 3 Credits.**

Offered autumn and spring. Prereq., CHMY 490 or consent of instr. and senior standing. Students complete and report on undergraduate research initiated as CHEM 490 or equivalent research experience. Reports are both oral and written. Level: Undergraduate

### **CHMY 501 - Teaching University Chemistry. 1 Credit.**

Offered autumn. Preparation for teaching chemistry at the college level. A survey of teaching fundamentals and educational psychology as applied to chemistry instruction. Level: Graduate

### **CHMY 541 - Environmental Chemistry. 3 Credits.**

Offered intermittently. Prereq., CHMY 360 OR 373. Chemical principles and reactions in natural systems: Fate of chemical contaminants in the environment; partitioning of contaminants between phases (air/water/soil); chemistry of atmospheric pollutants; computer modeling of equilibrium and kinetic processes; degradation and transformation of organic contaminants. Level: Graduate

### **CHMY 542 - Separation Science. 3 Credits.**

Offered autumn odd-numbered years. Prereq., CHMY 421, CHMY 360 or 373. Theory, method development, and application of analytical separations; solvent extraction; solid phase extraction; various forms of chromatography; electrophoresis. Level: Graduate

### **CHMY 543 - Mass Spectrometry. 3 Credits.**

Offered spring semester of odd years. Prereq., Graduate standing or CHMY 421. Fundamentals, instrumentation and applications of mass spectrometry in chemistry and biochemistry. Level: Graduate

### **CHMY 544 - Applied Spectroscopy. 3 Credits.**

Offered intermittently. Prereq., CHMY 421 or consent of instr. The function and application of optical (ultraviolet to infrared) chemical instrumentation. Specific topics include optics, light sources, detectors and a wide variety of spectrochemical methods with an emphasis on methods not typically covered in undergraduate instrumental analysis courses. Level: Graduate

### **CHMY 553 - Inorganic Chemistry and Current Literature. 4 Credits.**

Offered spring. Prereq., CHMY 401. A survey of the elements including transition metal reaction mechanisms, redox chemistry, organometallic chemistry, bioinorganic chemistry. Oral and written presentations on primary literature. Level: Graduate

### **CHMY 562 - Organic Structure and Mechanisms. 3 Credits.**

Offered intermittently. Prereq., one year of organic chemistry. Topics may include: stereochemistry, conformational analysis, aromaticity, transition state theory, isotope effects, solvent effects, substitution and elimination reactions, and mechanisms that involve carbocations, carbanions, radicals and carbenes as reactive intermediates. Level: Graduate

### **CHMY 563 - Organic Synthesis. 3 Credits.**

Offered intermittently. Prereq., CHMY 221-223. Theoretical treatise of the common methods used in organic synthesis including: oxidation, reduction, organometallics, C-C bond forming reactions, synthetic strategies and total synthesis. Level: Graduate

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### **CHMY 566 - FT-NMR for Graduates. 1 Credit.**

Offered intermittently. Prereq., CHMY 221-222; research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy. Level: Graduate

### **CHMY 568 - Organometallic Chemistry. 3 Credits.**

Offered intermittently in autumn. Prereq., CHMY 221, 223, 401, 403. Survey of the reactivity and structure of main group and transition metal organometallic compounds with an emphasis on applications to organic synthesis and catalysis. Level: Graduate

### **CHMY 573 - Advanced Physical Chem. 3 Credits.**

Offered intermittently. Prereq., CHMY 371-373. Fundamental principles of physical chemistry and special applications. Level: Graduate

### **CHMY 580 - Advanced Graduate Research Seminars. 1 Credit.**

(R-10) Offered every term. Prereq., consent of instr. Formal oral and written presentations of research results and selected literature topics in a designated area. Level: Graduate

### **CHMY 593 - Professional Project. 3 Credits.**

Offered autumn and spring. Prereq., consent of instr. Preparation of a professional project appropriate to the needs and objectives of the individual student. Level: Graduate

### **CHMY 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **CHMY 596 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **CHMY 597 - Research. 1-10 Credits.**

Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student. Level: Graduate

### **CHMY 598 - Internship. 1-8 Credits.**

(R-8) Offered autumn and spring. Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **CHMY 599 - Thesis. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

### **CHMY 630 - Seminar. 1 Credit.**

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(R-14) Offered autumn and spring. Prereq., graduate standing in chemistry or biochemistry, or consent of instr. Level: Graduate

### **CHMY 640 - Introductory Graduate Seminar. 1 Credit.**

(R-20) Offered autumn. Prereq., graduate standing in chemistry or biochemistry or consent of instr. Seminar to acquaint new graduate students with departmental research. Level: Graduate

### **CHMY 650 - Graduate Chemistry Seminar. 1 Credit.**

(R-2) Offered spring. Prereq., graduate standing. A review and discussion of current research. Topics vary. Level: Graduate

### **CHMY 652 - Original Research Proposal. 1 Credit.**

Offered autumn. Prereq., CHMY 640 and CHMY 650. Preparation and presentation of original research proposals for third year graduate students. Level: Graduate

### **CHMY 697 - Research. 1-10 Credits.**

(R-60) Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **CHMY 699 - Dissertation. 1-10 Credits.**

(R-10) Offered autumn and spring. Preparation of extensive thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Chinese (CHIN)

### **CHIN 99 - Developmental. 1-99.99 Credits.**

### **CHIN 101 - Elementary Chinese I. 5 Credits.**

Offered autumn. Emphasis on speaking, reading and writing elementary Mandarin.

### **CHIN 102 - Elementary Chinese II. 5 Credits.**

Prereq., CHIN 101. Offered spring. Continuation of 101.

Gen Ed Attributes: Foreign Language Requirement

### **CHIN 191 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHIN 192 - Independent Study. 1-6 Credits.**

### **CHIN 201 - Intermediate Chinese I. 5 Credits.**

Offered autumn. Prereq., CHIN 102 or equiv. Emphasis on oral communication, with continuing development in all major skill areas: listening, speaking, reading and writing.

Gen Ed Attributes: Foreign Language Requirement

### **CHIN 202 - Intermediate Chinese II. 5 Credits.**

Offered spring. Prereq., CHIN 201 or equiv. Continuation of 201.

Gen Ed Attributes: Foreign Language Requirement

### **CHIN 211 - Chinese Culture and Civilization. 3 Credits.**

Offered intermittently. An introduction to the historical, intellectual, political, literary and social developments of China from early times to the present.

### **CHIN 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHIN 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **CHIN 301 - Advanced Chinese I. 3 Credits.**

Offered autumn. Prereq., CHIN 202 or consent of instr. Advanced Chinese, with emphasis on literary style, advanced grammar, and oral expression.

Gen Ed Attributes: Foreign Language Requirement

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### **CHIN 313L - Chinese Poetry in Translation. 3 Credits.**

Offered intermittently. The works of major Chinese poets to 1300 A.D.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **CHIN 314 - Traditional Chinese Literature. 3 Credits.**

Offered intermittently. Highlights of Chinese literature to 1800; includes philosophy, poetry, prose, and fiction.

### **CHIN 380 - Chinese Folktales. 3 Credits.**

Same as LS 311. Offered intermittently. The study of the aspirations, desires, loves, moral and aesthetic values of the Chinese people as expressed in their folk literature.

### **CHIN 388 - Readings in Classical Chinese. 3 Credits.**

Prereq., CHIN 102 or approved equivalent. Introduces the basic grammar, syntax, and vocabulary of Classical Chinese through the reading of selected short representative texts from the formative and mature periods of the language's history.

### **CHIN 391 - Special Topics. 1-12 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHIN 392 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **CHIN 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CHIN 492 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

## Classics (CLAS)

### **CLAS 155 - Survey of Greek and Roman Literature. 3 Credits.**

Offered every autumn. An introduction to the literature of classical Greece and Rome. Readings in English translations of ancient works by Homer, Sophocles, Herodotus, Plato, Cicero, Vergil, Livy, and Ovid (and/or similar authors).

### **CLAS 160L - Classical Mythology. 3 Credits.**

Offered every spring and intermittently in summer. Deities and myths of the Greeks and Romans, with emphasis on those of most importance to Western literature and art.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **CLAS 170 - Myth Seminar: Honors. 1 Credit.**

Offered every spring. Coreq., CLAS 160L. Research, writing, and discussion about the mythologies of the Greeks and Romans in a small group setting.

### **CLAS 180H - Environment & Nature in Classical World. 3 Credits.**

An interdisciplinary survey of Greek and Roman attitudes towards the environment. The course examines the intellectual and literary history of Classical environmental thought through literature as well as geography, anthropology, archaeology, art history. Topics covered include cosmogony, deforestation, evolution, famine, pre-industrial peasant economy, and human interaction with the landscape through engineering and agriculture. Offered Intermittently.

Gen Ed Attributes: Historical Studies, Writing Course-Intermediate

### **CLAS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one time offerings of current topics.

Gen Ed Attributes: Writing Course-Intermediate

### **CLAS 192 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring.

### **CLAS 193 - Study Abroad. 1 Credit.**

An orientation to the winter session travel program in Greece. It prepares students for overseas travel through an overview of the major historical periods of Ancient Greece. This overview includes an introduction to Greek art and architecture, history, literature, and philosophy. Students will also begin preparations for individual research projects that will present at various sites in Greece. This class will also help students prepare paperwork required by the University for overseas travel programs.

### **CLAS 198 - Internship. 1-6 Credits.**

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Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **CLAS 251L - The Epic. 3 Credits.**

(R-6) Offered intermittently. Prereq., WRIT 101 (or higher) or equivalent. Reading, study and discussion of epic poems. Selections will vary from Western and non-Western traditions.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **CLAS 252L - Greek Drama: Politics on Stage. 3 Credits.**

(R-6) Offered intermittently. Prereq., WRIT 101 (or higher) or equivalent. A study of the literary, artistic and political dimensions of Greek Tragedy and Comedy. Selections will vary.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **CLAS 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **CLAS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring.

### **CLAS 320 - Women in Antiquity. 3 Credits.**

Offered intermittently. Prereq., any one MCLG course in Classical Civilization or LATN 102 or GRK 102 or consent of instructor. Examination of varied sources from Ancient Greece, the Hellenistic World, and republican and imperial Rome to clarify the place of women in communities. Women's contribution to community and the mechanisms by which communities attempted to socialize female populations.

### **CLAS 360H - Ancient Greek Civilization and Culture. 3 Credits.**

Offered intermittently. Prereq., consent of instr. Slide-lecture course. Ancient Greek works of art and architecture, related to and explained by contemporary ideas and values of Greek society.

Gen Ed Attributes: Historical Studies

### **CLAS 365E - The Roots of Western Ethics. 3 Credits.**

Offered intermittently. Studies of the origins of Western ethical thinking in the writings of Greek writers and their application to current situations.

Gen Ed Attributes: Ethical & Human Values Course

### **CLAS 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offering of visiting professors, experimental offerings of new courses or one time offerings of current topics.

### **CLAS 392 - Independent Study. 1-6 Credits.**



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(R-12) Offered autumn and spring.

### **CLAS 393 - Study Abroad. 3 Credits.**

Prereq., CLAS 193. Site visits include Athens, Knossos, Mycenae, Corinth, Olympia, Delphi and others. Lectures on location in museums and archaeological sites.

### **CLAS 396 - Practicum. 1-12 Credits.**

### **CLAS 399 - Capstone. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course and LATN 202 and GRK 202 or equivalent and junior standing. The Classics Proseminar serves as a capstone experience and research methodology course required of majors in Classical Languages, Classical Civilizations, and Latin. Students will develop advanced research skills in a variety of interdisciplinary approaches arranged around a seminar topic. Students will have the opportunity to be introduced to advanced topics in Classics including lexicography, epigraphy, palaeography, textual criticism, archaeology, numismatics, etc. The class will culminate in a research symposium during which students will present their research papers.

Gen Ed Attributes: Writing Course-Advanced

### **CLAS 594 - Graduate Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Level: Graduate

### **CLAS 595 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offering of visiting professors, experimental offerings of new courses or one time offerings of current topics. Level: Graduate

### **CLAS 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Level: Graduate

### **CLAS 598 - Internship. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

## Climate Change Studies (CCS)

### **CCS 102 - Intro to Energy Systems II. 3 Credits.**

Offered spring. Prereq., NRG 101 or consent of instructor. A survey of renewable energy systems and technologies. Addresses physical and technical aspects of wind, solar, geothermal, hydro, tidal, biological, and wave energy systems. Consideration is given to engineering, economic, social, environmental, and political factors that determine implementation and sustainability.

### **CCS 103X - Introduction to Climate Change: Science & Society. 3 Credits.**

Offered autumn. This is an introductory and foundational course on the scientific and social dimensions of global climate change. The goal of this course is to provide students with a basic understanding of the fundamental scientific, social, political and technological issues arising from rapid climatic change. As a result, it provides students with a breadth of knowledge and builds connectedness across these varied dimensions of the complex global issue.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **CCS 191 - Energy Practicum. 2 Credits.**

Offered intermittently. Prereq., EET 111 or consent of instructor. A practicum that provides students with a supervised field experience. Students gain hands-on experience with energy specific technologies.

### **CCS 295 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CCS 298 - Internship. 2 Credits.**

Offered every term. Consent of instructor required. Extended classroom experience providing practical application of classroom learning through on the job training in a student's field of study. This experience increases student skills, prepares them for initial employment, and increases occupational awareness and professionalism.

### **CCS 352 - Climate Field Studies. 3 Credits.**

Offered summer. This is an interdisciplinary field course focused on climate change impacts and adaptation. Through site visits and meetings with key decision-makers, students gain knowledge of projected impacts due to climate change (water availability, wildfire, beetle kill, biodiversity), the impacts to various sectors of human society (land management, food and water security, economic stability, and livelihoods), and different mitigation and adaptation responses.

### **CCS 391 - Climate Change Practicum. 2-4 Credits.**

Offered autumn and spring. Prereq., consent of instructor. Provides an opportunity for students to design and implement a capstone project involving creative solutions to climate change.

### **CCS 395 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **CCS 398 - Climate Change Internship/SERV. 2-4 Credits.**

(R-6) Offered autumn and spring. This course gives students an opportunity to gain hands-on, "real world" experience working with a local, regional, national or international group to address climate change. Students gain supervised, practical work experience with specific projects and organizations; create a network of professional contacts; and have opportunity to apply ideas and approaches studied in the Climate Change Studies minor.

### **CCS 494 - Climate Change Study Seminar. 1-4 Credits.**

Offered intermittently. A seminar on a current climate change topic.

### **CCS 495 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offering of visiting professors, experimental offerings of new courses or one time offerings of current topics.

## Coaching (COA)

### **COA 405 - Advanced Concepts in Coaching. 3 Credits.**

Prereq., junior or senior undergraduate status or graduate status. This class will introduce students to a solid foundation in coaching to include: coaching theories, competitive coaching strategies, training methods and techniques. This course will cover the requirements for the bronze level of the American Sport Education Program (ASEP). Course graded credit/no credit or for a letter grade. The class is appropriate for coaches at all levels but will focus on basic skills of coaching for youth through high school.

### **COA 494 - Workshop. 1-6 Credits.**

(R-6) Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

## College Success (COLS)

### **COLS 101 - First Year Seminar. 2 Credits.**

Offered at Missoula College. This course is designed to help new students make a successful transition to college and acquire the skills needed to become competent and successful in higher education. Topics include an introduction to campus resources and academic policies; motivation and time management; study skills and learning strategies; critical thinking and problem solving; ethics, diversity and collaboration; information literacy and research. The course culminates with a semester capstone project. Elective credit only. Credit not allowed for both COLS 101 and COLS 103.

### **COLS 103 - Study & Learning Strategy. 3 Credits.**

Offered at Missoula College. This course facilitates the development of skills needed to become competent and successful in higher education. Topics include management of classroom performance, time, and money; memory, listening and note-taking; reading and test-taking strategies; critical thinking and problem-solving; information literacy and research; ethics and diversity; stress management and healthy choices. Elective credit only. Credit not allowed for both COLS 101 and COLS 103.

### **COLS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COLS 295 - Peer Tutoring Training. 2 Credits.**

Offered every semester at Missoula College, open to Missoula College or Mountain Campus students who have completed at least 1 semester in the course for which they will tutor. Prereq., consent of instructor. Meets in class 1 hour each week (online course supplement), with three hours of tutoring per week in supervised setting required after week 3.

### **COLS 394 - Peer Educator Training Seminar. 1 Credit.**

This course focuses on establishing a base understanding of the peer educator role, equipping students with the knowledge and skill sets to triage common situations, and preparing students selected as Peer Educators for the COLS 194 first year experiences for work as instructional team members.

### **COLS 498 - Internship: Advanced Peer Educator. 1-6 Credits.**

(R-6) Special internships under instructor supervision offering practical experience.

## Communication (COMX)

### **COMX 102 - Interpersonal Skills in the Workplace. 1 Credit.**

Offered at Missoula College. This course will introduce students to interpersonal communication theory which can be applied to a workplace environment. Students will learn effective communication strategies that promote success in professional and personal relationships.

### **COMX 111A - Introduction to Public Speaking. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Preparation, presentation, and criticism of speeches. Emphasis on the development of public speaking techniques through constructive criticism. Credit not allowed for both COMM 111A and COM 160A.

Gen Ed Attributes: Expressive Arts Course (A)

### **COMX 115S - Introduction to Interpersonal Communications. 3 Credits.**

Offered autumn and spring. Offered on Mountain Campus and at Missoula College. An overview of the process of human communication with special emphasis on analyzing communication patterns and improving interpersonal communication skills. Credit not allowed for both COMM 110S and COM 150S.

Gen Ed Attributes: Social Sciences Course (S)

### **COMX 140L - Introduction to Visual Rhetoric. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. An introduction to the persuasive nature of visual symbols as texts. Readings will include historical to contemporary rhetorical criticisms on advertising, billboards, bodies, cartoons, memorials, and photography.

Gen Ed Attributes: Lit & Artistic Studies (L), Gen Ed Attributes: Democracy and Citizenship (Y)

### **COMX 191 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COMX 191S - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Gen Ed Attributes: Social Sciences Course (S)

### **COMX 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **COMX 198 - Internship. 1-6 Credits.**

(R-6) Offered autumn and spring. Offered at Missoula College. Prerequisite, consent of instructor. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A

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maximum of 6 credits of Internship (398, 498) may count toward graduation.

### **COMX 202S - Nonverbal Communication. 3 Credits.**

Offered yearly. Nonverbal code systems and how they function in human communication including gestures, facial expressions, personal space, and others.

Gen Ed Attributes: Social Sciences Course (S)

### **COMX 204X - International and Development Communication. 3 Credits.**

Offered yearly. International Communication is concerned with information exchange across national borders while Development Communication focuses on the historical, current, and prospective role of communication technologies in social change, improving living conditions, and enhancing life prospects - mainly in developing countries.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **COMX 205Y - Deliberative Democracy. 3 Credits.**

Offered at Missoula College. This course introduces you to the theory and practice of deliberative democracy, in which citizens and other individuals actively participate to help society reach decisions that are just, sound and sustainable. You will learn how deliberative and other participatory democratic processes have been used around the globe to allocate limited resources, meet collective needs, and achieve common goals. You will build your capacities for inquiry, listening to understand, appreciation, reflection, considering multiple perspectives, and finding common ground, all of which are part of dialogue and deliberation. Case studies and hands-on practice will help you appreciate the challenges and opportunities of deliberative democracy. This course will build your capacities to be an informed, engaged and empowered global citizen. Level: Undergraduate

Gen Ed Attributes: Democracy and Citizenship (Y)

### **COMX 210 - Communication in Small Groups. 3 Credits.**

Offered autumn and spring. Theory and research related to communication roles, collaboration, cohesion, leadership, and decision-making. Experiences provided in task oriented groups and field analyses of group processes.

### **COMX 212X - Introduction to Intercultural Communication. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. This course provides students with an introduction to communicating across cultures. Local and global case studies and theories will be explored. Students will explore the influence of immediate communication and social media on large scale social issues.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **COMX 219S - Survey of Children's Communication. 3 Credits.**

Offered autumn. Offered at Missoula College. Focus on communication processes and contemporary communication environments of children and adolescents. Topics include language development and the brain, nonverbal communication development, media, contracting, bullying, and gender.

Gen Ed Attributes: Social Sciences Course (S)

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### **COMX 220S - Introduction to Organizational Communication. 3 Credits.**

Offered yearly. Theory and research on communication in organizations. Focus on topics such as productivity, power, culture, socialization, technology and globalization covering a wide range of organizations including corporations, government, educational institutions, non-profit agencies and media organizations.

Gen Ed Attributes: Social Sciences Course (S)

### **COMX 222 - Professional Communication. 3 Credits.**

Offered intermittently. Explores communication skills needed in business and professional contexts. Focus on developing a working knowledge of theory and skills for interpersonal communication, group communication, and business writing. Concepts include communication processes, diversity in the workplace, nonverbal communication, technical communication, communication with customers, and employment communication.

### **COMX 240H - Introduction to Rhetorical Theory. 3 Credits.**

Offered yearly. An overview of rhetorical theory including an exploration of classical rhetoric, British and Continental rhetorical theory, and contemporary theories of language and persuasion.

Gen Ed Attributes: Historical Studies

### **COMX 241 - Persuasive Communication. 3 Credits.**

Offered yearly. The use of communication in attitude and behavior change as experienced in personal, organizational, and public contexts.

### **COMX 242 - Argumentation. 3 Credits.**

Offered autumn and spring on the Mountain campus, offered intermittently on the Missoula College campus. Development of argumentation skills and critical judgment in decision-making and debate. Includes criticism, construction, presentation, and refutation of spoken and written arguments.

### **COMX 250 - Introduction to Public Relations. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Introduction to the origin, scope, and nature of public relations activities. Investigation of policies, strategies, and procedures available to an organization in establishing and controlling its communications. Course will explore the impact of public relations and media through case studies and writing exercises.

### **COMX 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COMX 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **COMX 311 - Family Communication. 3 Credits.**



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Offered yearly. An examination of communication in marriage/romantic partnership, parent-child, and extended family relationships. Topics include intimacy, power, decision-making, problem solving, identity formation, and interpersonal perception.

### **COMX 312 - Forensics/Honors. 1-3 Credits.**

(R-12) Offered every term. Preparation and participation in competitive speech and debate, including Lincoln/Douglas and Parliamentary debate. The team travels to regional competitions and hosts on-campus and intramural debates and speaking events. Up to 6 credits may apply toward a major or minor in communication studies.

### **COMX 343 - Persuasive Speaking and Criticism. 3 Credits.**

Offered yearly. Prereq., COMM 111A or consent of instructor. The persuasive process through the criticism and creation of speeches and other rhetorical artifacts emphasizing the role persuasion plays in creating and shaping our culture.

### **COMX 347 - Rhetoric, Nature, and Environmentalism. 3 Credits.**

Offered every other year. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Survey of rhetorical texts that shape public understanding of nature and environmental issues. Analysis of a range of historical and contemporary environmental texts using theoretical concepts from the rhetorical tradition.

Gen Ed Attributes: Writing Course-Advanced

### **COMX 349 - Communication, Consumption, and Climate. 3 Credits.**

Offered every other year. Analyzes consumption as a communication practice, investigates discourses that promote consumption, and illuminates environmental impacts on consumption.

### **COMX 351 - Principles of Public Relations. 3 Credits.**

Offered yearly. The many uses of communication in the endeavor of public relations. Communication theories and models including interpersonal communication, organizational communication, and mass communication are applied to explore the internal and external communication behavior associated with public relations.

### **COMX 352 - Public Relations Portfolio. 3 Credits.**

Offered yearly. Writing documents such as press releases, fact sheets, brochures and speeches to create relationships between organizations and their publics.

### **COMX 380 - Gender and Communication. 3 Credits.**

Offered yearly. The meaning of gender in our culture. Examines how gender is displayed and perpetuated through social institutions such as the media and through our private and public verbal and nonverbal interactions.

### **COMX 381 - Gender & Sports. 3 Credits.**

Offered yearly. COMX 380 is recommended. This class will examine how gender is communicated in sports. We will examine the role(s) sports play in creating and reinforcing our concepts of gender in a variety of contexts. We will look at such places like the locker room, media's coverage of sports, coaching and coaches,

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and the players themselves. Additionally, we will examine the actions of fans and the athletes and the roles they play on our understanding of gender. Finally, we will examine issues of race, sexuality, disability, class, and the language of sports to better understand the importance of those issues on gender.

### **COMX 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COMX 398 - Internship. 1-6 Credits.**

(R-6) Offered autumn and spring. Preq., consent of instructor. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (398, 498) may count toward graduation. Offered CR/NCR only.

### **COMX 412 - Communication and Conflict. 3 Credits.**

Offered autumn and spring. Conceptual and practical discussions of communication and conflict in interpersonal relationships, organizational settings and overall cultural milieu. Topics include culture, power, styles, negotiation and bargaining, mediation, dissent, dispute systems, and crisis communication. Credit is not allowed for both COMX 413 and COMX 412.

### **COMX 413 - Communication and Conflict-Writing. 3 Credits.**

Offered yearly. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Conceptual and practical discussions of communication and conflict in interpersonal relationships, organizational settings and overall cultural milieu. Fulfills Upper-Division Writing requirement for Communication Studies majors. Credit is not allowed for both COMX 413 and COMX 412.

Gen Ed Attributes: Writing Course-Advanced

### **COMX 414 - Communication in Personal Relationships. 3 Credits.**

Offered yearly. Prereq., WRIT 101 or equivalent, and one intermediate writing course and COMX 115S or consent of instructor. An examination of the functions, types, and historical context of close personal relationships with an in-depth study of the role of communication in friendships and romantic relationships.

Gen Ed Attributes: Writing Course-Advanced

### **COMX 415 - Intercultural Communication. 3 Credits.**

Offered autumn and spring. Communication principles and processes in cross-cultural environments. Non-Western cultures are emphasized by contrasting them to Western communication norms.

### **COMX 421 - Communication in Nonprofit Organizations. 3 Credits.**

Offered yearly. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Focuses on issues in nonprofit organizational communication at macro and micro levels. Topics include: organizational identity, change processes, public relations, fund-raising, advocacy, socialization, stress and burnout, board management and professionalization.

Gen Ed Attributes: Writing Course-Advanced

**COMX 422 - Communication and Technology. 3 Credits.**

Offered every other year. Prereq., WRIT 101 or equivalent, and one intermediate writing course. This course takes a critical look at the influence of communication technologies on organizational communication. Students will examine how the world of work is changing due to new technologies and explore the social and ethical implications of technical innovation, adoption and use.

Gen Ed Attributes: Writing Course-Advanced

**COMX 423 - Organizational Communication Consulting and Training. 3 Credits.**

Offered every year. Prerequisite, COMX 220S or consent of instructor. Not open to PCOM. Emphasis on the theoretical and practical issues involved in communication training and consultation. Overview of theoretical models followed by the "nuts and bolts" of communication training, development, and assessment. Students will carry out a training or consultation project (e.g., planning, execution, and evaluation) to sharpen the issues explored.

**COMX 424 - Risk, Crisis, and Communication. 3 Credits.**

Offered every other year. Prereq., WRIT 101 or equivalent, and one intermediate writing course. This course explores the communicative dynamics that both prevent and cause organizational crisis. Through case studies, the class examines how people plan, communicate and make good decisions in high-risk situations, as well as how to manage crisis public relations effectively.

Gen Ed Attributes: Writing Course-Advanced

**COMX 425 - Communication in Health Organizations. 3 Credits.**

Offered every other year. Not open to PCOM. This course explores the key issues at the intersection of health communication and organizational communication by considering communication processes that occur in a number of distinct contexts of health organizations. Through case studies and health campaigns students explore contemporary concerns and theory in the area of health communication.

**COMX 445 - Rhetorical Criticism and Theory. 3 Credits.**

Offered yearly. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Introduction to study of rhetorical criticism and theory. Current theoretical and methodological issues and approaches including traditional criticism, experiential criticism, dramatism, narrative criticism, feminist criticism, postmodern criticism.

Gen Ed Attributes: Writing Course-Advanced

**COMX 447 - Rhetorical Construction of Women. 3 Credits.**

Offered every other year. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Explores the rhetoric surrounding contemporary women's social "activism" in the U.S. Topics include women's rights, women's liberation, consciousness raising as a rhetorical form, reproductive rights, sexuality, and intersections between gender, race, and class.

Gen Ed Attributes: Writing Course-Advanced

**COMX 448 - Feminisms and Film. 3 Credits.**

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Offered every-other spring. Hollywood films are cultural artifacts that speak to the times in which they are made. In this class, we explore the intersection between US feminisms and films, focusing on films made during the second wave of feminisms as well as films that depict this history of the feminist movement.

### **COMX 449 - Rhetoric of Women's Activism. 3 Credits.**

Offered every other year. Explores the rhetoric surrounding contemporary women's social "activism" in the U.S. Topics include women's rights, women's liberation, consciousness raising as a rhetorical form, reproductive rights, sexuality, and intersections between gender, race, and class.

### **COMX 460 - Research Methods. 3 Credits.**

Offered autumn and spring. Open only to majors in COMM. Prereq., Grade of C- or better in EDLD 486 or PSYX 222 or SOCI 202 or STAT 216. Introduction to the major types of communication research and the foundations of quantitative research methods.

### **COMX 461 - Communication Research Seminar. 1-3 Credits.**

(R-9) Offered autumn and spring. Coreq., COMX 460. Application of quantitative and qualitative research methods to specialized contexts. Emphasis on direct student involvement in research activities.

### **COMX 480 - Health Communication. 3 Credits.**

This course explores key findings in health communication research and practice, focusing on a wide range of media. As a survey course, it provides an overview of the field of health communication with attention to analysis and practice of health communication relationships and messages. It examines the literature and key health communication campaigns, messages and target audiences.

### **COMX 483 - Communication for Social and Behavior Change. 3 Credits.**

Aims to equip students with skills for using the power of communication to bring about positive change locally and globally in areas such as public health, sustainable development, and social justice. The course connects theory to practice in social and behavior change communication and introduces a wide array of implementation models and tool kits. Level: Undergraduate-Graduate

### **COMX 485 - Interaction and Well-being. 3 Credits.**

Offered yearly. Theory and research on the health correlates of human interaction.

### **COMX 491 - Special Topics. 1-3 Credits.**

(R-9) Offered intermittently. Not open to PCOM. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COMX 492 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instructor. Offered CR/NCR only.

### **COMX 493 - Study Abroad/Tours. 1-12 Credits.**

### **COMX 495 - Practicum. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Organized field experience.

### **COMX 510 - Seminar in Personal Relationships. 3 Credits.**

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(R-6) Offered yearly. Examines theory and research on the process and functions of communication in personal relationship contexts. Interdisciplinary readings illuminates the dynamics of communication in the development, maintenance, and deterioration of romantic relationships, friendships, and family relationships. Discussion and assignments center around theoretical, methodological, and practical issues in research on communicative activities and events in personal relationships. Level: Graduate

### **COMX 511 - Survey of Interpersonal Communication. 3 Credits.**

Offered every other year. Survey of theories and research in interpersonal communication including definitions of interpersonal communication, its place in the field of communication, and methodological issues. Overall emphasis on foundational readings and recent research developments. Level: Graduate

### **COMX 512 - Seminar in Communication and Conflict. 3 Credits.**

(R-6) Offered intermittently. A review and discussion of current research regarding conflict in different levels and contexts of communication. Level: Graduate

### **COMX 515 - Environmental Negotiation Mediation. 3 Credits.**

Same as ENST 515, LAW 519 and NRSM 515. This course prepares students to effectively engage in multiparty negotiation on natural resource and environmental issues. It is grounded in theory and provides an opportunity to develop practical skills in both negotiation and facilitation/mediation. Guest speakers, case studies, and simulations allow students to develop, test, and refine best practices. The course is face-paced, highly interactive, and serves as the second of three required courses in the Natural Resources Conflict Resolution Program. Level: Graduate

### **COMX 520 - Seminar in Organizational Communication. 3 Credits.**

(R-6) Offered every other year. Introduction to theories and research in organizational communication. Topics include culture, networks, structure, technology, identity, power, resistance, gender, and globalization. Overall emphasis on foundational readings and recent research developments. Level: Graduate

### **COMX 540 - Seminar in Instructional Communication. 3 Credits.**

Offered every other year. Instruction in the theories, concepts, principles, and skills employed university level classroom communication and instruction. Level: Graduate

### **COMX 541 - COMM Teaching Methods. 2 Credits.**

(R-8) Offered autumn and spring. Prereq., consent of instr. Restricted to Communication majors only. Offered CR/NCR only. Level: Graduate

### **COMX 555 - Seminar in Rhetoric, Criticism, & Theory. 3 Credits.**

Offered annually. Introduction to contemporary issues in rhetorical criticism and theory. Methods reviewed include classical criticism, dramatism, close textual analysis, ideographic criticism, narrative criticism, feminist criticism, and postmodern criticism. Level: Graduate

### **COMX 561 - Qualitative Research Methods. 3 Credits.**

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Offered every year. An emphasis on the philosophy and practice of qualitative inquiry, the development and use of descriptive frameworks, and gathering and testing qualitative data to develop human communication theory. Level: Graduate

### **COMX 575 - Seminar: Rhetoric & Environmental Controversy. 3 Credits.**

Offered every other year. Same as ENST 575. The study of how advocates use symbols to influence meaning and action in environmental controversies. Rhetorical theory is used to identify, analyze, and evaluate persuasive strategies and tactics. Level: Graduate

### **COMX 591 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **COMX 593 - Professional Paper. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **COMX 594 - Topical Seminar. 1-2 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

### **COMX 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **COMX 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **COMX 599 - Thesis. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Communicative Sci & Disorders (CSD)

### **CSD 109 - SLPeeps: A First Year Guide to CSD. 1 Credit.**

Offered autumn for credit/no credit grade mode only. This survey course is designed to present an overview of the CSD major, provide support for graduation success, and inform students about the profession as whole including practicing requirements. Level: Undergraduate

### **CSD 110 - Introduction to Speech, Language, and Audiology. 3 Credits.**

Offered intermittently. Introduction to the scientific study of human communication and its disorders and to the professions of Speech-Language Pathology and Audiology. Overview of biological systems of speech, language, and hearing and the nature and treatment of communication disorders.

### **CSD 191 - Special Topics. 1-6 Credits.**

### **CSD 194 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. A review and discussion of current research. Topics vary.

### **CSD 205 - Clinical Application and Observations in Speech-Language Pathology and Audiology. 2 Credits.**

Offered intermittently. Students will learn roles and responsibilities of being a speech-language pathologist and audiologist HIPAA regulations, and health and safety guidelines. This course is designed as an orientation and observation class which will prepare you for your future work in the area of Communicative Disorders.

### **CSD 210 - Speech & Language Development. 3 Credits.**

Offered intermittently. Sophomore standing or greater. Topics include typical speech and language development, phonology, semantic, morphological, syntax, and pragmatics, along with individual differences, second language acquisition and literacy.

### **CSD 221N - Fundamentals of Acoustics. 3 Credits.**

Offered intermittently. Provides students with a basic and working knowledge of acoustics and the physics of sound. Provides the basis for measurement and description of speech stimuli. Direct application to Speech Hearing and Language intervention as well as application into communicative sciences.

Gen Ed Attributes: Natural Science Course (N)

### **CSD 222 - Introduction to Audiology. 3 Credits.**

Offered intermittently. Introduction to principles of acoustics as a basis for understanding hearing assessment. Development of ability to interpret audiograms as well as the results from a hearing evaluation. Includes pure tone and speech audiometry, acoustic immittance and reflex testing. Hearing screening procedures are also included.

### **CSD 261 - Introduction to Speech-Language Pathology Assistant. 1-3 Credits.**

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Offered intermittently. Prereq., CSD 110 and CSD 210. This course is intended to provide the prospective speech-language pathology assistant (SLPA) with basic information about speech and hearing screening protocols and procedures. The focus of the course is on the role of the SLPA in clinical practice and follows the guidelines and scope of practice for SLPAs established by the American Speech-Language-Hearing Association.

### **CSD 265 - Developmental Speech and Language Disorders and Treatment. 3 Credits.**

Offered intermittently. Prereq., CSD 210. Nature of developmental speech and language disorders and basic understanding of principles underlying assessment and treatment of these disorders.

### **CSD 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **CSD 320 - Phonological Development & Phonetics. 3 Credits.**

Offered intermittently. Junior standing or higher. Exploration of the sounds and sound structure of American English and some of its dialects. Introduction to the theory and practice of phonetic and phonological analysis and trained in the transcription of speech into the International Phonetic Alphabet.

### **CSD 330 - Anatomy and Physiology of the Speech and Swallowing Mechanism. 3 Credits.**

Offered intermittently. Introduction to anatomy and physiology of the speech and swallowing mechanisms including the anatomical orientation and embryological development, the breathing mechanism, structures of phonation and swallowing, articulators, and the nervous system

### **CSD 331 - Neurological Bases of Communication and Swallowing. 3 Credits.**

Offered intermittently. Prereq., CSD 330. Focused study on the anatomy of the nervous system and how the nervous system supports behaviors inherent to communication and swallowing. Students will be introduced to anatomical terms, structures, and functions. Clinical implications will be linked to class with a focus across the lifespan. Level: Undergraduate.

### **CSD 365 - Acquired Communication and Swallowing Disorders. 3 Credits.**

Offered intermittently. Prereq., junior standing or higher. Identification, assessment, and intervention for a variety of acquired speech, language, cognitive, and swallowing disorders. Introduction to potential psychosocial impacts and educational concerns, utilizing the WHO-ICF, multicultural considerations, and incorporation of family members. Introduction to clinical documentation for acquired disorders.

### **CSD 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

### **CSD 396 - Autism on Campus/Service Learning. 2 Credits.**

Prereq., junior or senior standing, consent of instructor, and application required. This course educates students about autism in adults. The didactic portion addresses topics aligned with the specialized consideration of people with autism. The service learning portion allows direct mentorship to adults on and off campus with autism and related disorders..



**CSD 405 - The Clinical Process. 3 Credits.**

Offered intermittently. Prereq., CSD 210, CSD 222, CSD 320, and CSD 365. The underlying principles of clinical methods and practice including: the observation of human behavior and clinical processes, assessment of communication differences, clinical management of these differences, delays and disorders, behavior, interviewing/counseling, lesson planning, and writing skills.

**CSD 420 - Speech and Hearing Science. 3 Credits.**

Offered intermittently. Prereq., CSD 222, CSD 320, and CSD 330. Physiologic, neurologic, and acoustic aspects of human communication, theoretical framework for speech and hearing science, and principles of acoustics applied to speech language pathology across the lifespan. Level: Undergraduate

**CSD 430 - Senior Capstone. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent and senior status. Part one of a two course sequence where the student completes an independent project. Students will prepare a literature review, and ethics application, and a proposal in preparation for a major research project of their design.

Gen Ed Attributes: Writing Course-Advanced

**CSD 445 - Autism and Complex Communication Needs. 2-4 Credits.**

Offered intermittently, Prereq. junior or senior standing. This course explores and integrates social aspects of communication (e.g., behavioral and social skills affecting communication) and communication accommodations, adaptations, and links to functional and daily-living in individuals with severe to complex communication disorders. This includes a focus on assessment and treatment processes and evidence-based practices for prevalent diagnoses such as autism spectrum disorder.

**CSD 450 - Intro to Aural Rehabilitation. 3 Credits.**

Offered intermittently. Prereq., CSD 210, CSD 222, or graduate standing. Fundamental skills in speech reading, various types of hearing aids, and the tools necessary to assess and implement auditory training. Management of the client with hearing impairment including psycho-social development and educational intervention. Both children and adults are included.

**CSD 460 - Language Assessment and Intervention for Children Birth to Preschool. 3 Credits.**

Offered intermittently. Prereq., CSD 210, CSD 320, and senior standing. Students learn language assessment and intervention for children with language delays and disorders from birth to age six including language sampling and analysis procedures, interpreting formal and informal testing, facilitating language through strategies and corresponding theories, planning clinical management and intervention, and enhancing emergent literacy. Level: Undergraduate and Graduate

**CSD 461 - Advanced Methods for Speech-Language Pathology/Audiology Assistants. 1-3 Credits.**

Offered intermittently. Prereq., or coreq., CSD 361. This course is intended to provide students studying to become speech-language pathology/Audiology Assistants with advanced clinical methodologies associated with individuals with a range of communication abilities. The focus of the course is on the advanced role of the SLP/Audiology-Assistants in clinical practice and follows the guidelines and scope of practice for SLP/Audiology-Assistants established by the American Speech-Language-Hearing Association.

**CSD 466 - Acquired Cognitive Communication Disorders. 3 Credits.**

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Offered intermittently. Prereq., senior standing. Assessment, treatment, and prevention of acquired cognitive-communication disorders including pediatric and adult traumatic brain injury (TBI) and mild traumatic brain injury (MTBI), right hemisphere syndrome (RHS), and dementia. Emphasis on neurobiological principles of rehabilitations, differential diagnosis and theories, and evidence-based research pertaining to clinical management.

### **CSD 480 - Multicultural Issues. 3 Credits.**

Offered intermittently. Prereq., CSD 210, CSD 222, and CSD 320. Topics include: dynamics of community and culture; strategies to communicate with people from a variety of backgrounds; learning English as a second language; phonological and linguistic analysis of differences between Standard English speakers and culturally diverse populations and international differences in service delivery.

### **CSD 490 - Research. 1-3 Credits.**

(R-6) Offered Autumn, Spring. Prereq., consent of the instructor. Participation in independent or instructor associated research activities.

### **CSD 491 - Special Topics. 1-3 Credits.**

(R-6) Offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSD 492 - Independent Study. 1-6 Credits.**

### **CSD 495 - Practicum. 1-3 Credits.**

(R-5) Prereq., lower division CSD courses and consent of CSD Clinical Director. A maximum of 5 credits of clinical practicum may count toward graduation. Allows the advanced student an opportunity to pursue independent or small group clinical practicum. Students will be directly supervised by a certified speech and language pathologist or audiologist.

### **CSD 498 - Independent Research. 1-4 Credits.**

(R-6) Offered Autumn, Spring. Prereq., consent of the instructor. Participation in independent or instructor associated research activities.

## Community Health (CHTH)

### **CHTH 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student

### **CHTH 355 - Theory and Practice of Community Health Education. 3 Credits.**

Prereq., PUBH 101 or KIN 205. History, philosophy, and theory related to community health education and health promotion. Includes the application of program development principles and health promotion strategies to community health programs.

### **CHTH 414 - Health and Culture. 3 Credits.**

This course will provide students with an interdisciplinary perspective on global health. Students will assess health beliefs, health-related behavior, sickness distribution, treatment and experience in a range of socio-cultural contexts. There is an emphasis on applied research in health promotion and disease prevention programs. This course co-convenes with CHTH 514. Level: Undergraduate

### **CHTH 445 - Program Planning in Community Health. 4 Credits.**

Prereq., CHTH 355. Overview of the issues, approaches, and techniques community health educators and professionals utilize in planning and implementing programs to assist communities in improving health status and reducing risky behaviors and their determinants. This course co-convenes with HHP 541.

### **CHTH 485 - Theories of Health Behaviors and Counseling. 3 Credits.**

Exploration of the helping role as it relates to health behavior, health assessment, problem-solving and referral skills. Application of theories to facilitation of healthy behavior changes.

### **CHTH 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **CHTH 491 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **CHTH 492 - Independent Study. 1-3 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **CHTH 494 - Seminar. 1-6 Credits.**

(R-6) Prereq., consent of instr. Offered intermittently. A review and discussion of current research. Topics vary.

### **CHTH 498 - Internship. 1-6 Credits.**

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(R-6) Prereq. all PH concentrations minimum junior standing and ECP 120/121 (or equivalent). Suggested for Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 14 credits their internship semester.

### **CHTH 514 - Health and Culture. 3 Credits.**

This course will provide students with an interdisciplinary perspective on global health. Students will assess health beliefs, health-related behavior, sickness distribution, treatment and experience in a range of socio-cultural contexts. There is an emphasis on applied research in health promotion and disease prevention programs. This course co-convenes with CHTH 414. Graduate students taking CHTH 514 will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **CHTH 591 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

## Computer Applications (CAPP)

### **CAPP 091 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Credit does not count toward an Associate of Arts, Associate of Applied Science, or Baccalaureate degree.

### **CAPP 120 - Introduction to Computers. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Introduction to computer terminology, hardware, and software, including wire/wireless communications and multimedia devices. Students utilize word processing, spread sheet, database, and presentation applications to create projects common to business and industry in a networked computing environment. Internet research, email usage, and keyboarding proficiency are integrated.

### **CAPP 154 - MS Word. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Preparation of business forms, correspondence, mail merges, columnar projects, and reports using up-to-date software. Business related application projects, graphics, and printer operation are included.

### **CAPP 156 - MS Excel. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., CAPP 120. Emphasis on the use of the spreadsheet, graphics, and databases to solve quantitative business problems. Includes projects relating to data and graphs/charts.

### **CAPP 171 - Communicating via Computers. 3.000 Credits.**

Offered intermittently. Prereq., previous computer experience or consent of instr. The use of the computer for information presentation and communication; emphasis placed on the use of electronic resources for the access, management, and presentation of information.

### **CAPP 254 - Advanced MS Word. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CAPP 154 or consent of instructor. Analysis of the concepts of advanced work processing document production underlying mastery of the software. Business-related application projects utilizing critical thinking are included. A speed and timing component to increase skills essential for employment will be a portion of this course.

### **CAPP 292 - Independent Study. 1-6 Credits.**

Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## Computer Science/Programming (CSCI)

### **CSCI 100 - Intro to Programming. 3.000 Credits.**

Offered autumn and spring. This course covers basic programming concepts such as variables, data types, iteration, flow of control, input/output, functions, and objects. The course will also cover programming ideas such as data structures, algorithms, modularity, and debugging. Students will learn about the role computation can play in solving problems by writing interesting programs to solve useful goals. No prior programming experience is expected. (Two hours independent lab per week.) Credit not allowed for both CSCI 100 and CSCI 110.

### **CSCI 105 - Computer Fluency. 3.000 Credits.**

Offered autumn and spring. Introduces the skills and concepts of information technology, both from practical and a more theoretical point of view. During lectures and interactive computer labs, students will explore a wide range of digital and information technologies, including common PC applications, networking, databases, privacy, and security. Credit not allowed for both CSCI 105 and CRT 111 and CS 111.

### **CSCI 106 - Careers in Computer Science. 1 Credit.**

Offered autumn. Exploration of various careers available in the general area of Computer Science. Includes discussion of strategies for success in the major. Computer Science faculty members also will discuss possible undergraduate research opportunities and motivation for graduate education.

### **CSCI 107 - The Joy and Beauty of Computing. 3 Credits.**

Examines the computing field and how it impacts the human condition. Introduces exciting ideas and influential people. Provides a gentle introduction to computational thinking using the Python programming language.

### **CSCI 108 - Interdisciplinary Computing: Practical Computational Problem Solving. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent. Students will develop critical thinking and problem solving by applying computational problem solving across a broad range of interdisciplinary fields. This course is not a programming course. Instead, students will focus on problem specification, meta-analysis, formal description, generalizing solutions, enumerating decision possibilities and outcomes, process analysis, problem partitioning, and digital representation using the English language.

Gen Ed Attributes: Writing Course-Intermediate

### **CSCI 113 - Programming with C++ I. 3 Credits.**

Offered spring. Offered at Missoula College. M 090 or ALEKS score  $\geq$  or M01-Maplesoft Arithmetic score  $\geq$  9 recommended prior to taking course. Object oriented programming using C++. Implementation of structured programming concepts along with construction of classes to create data types for defining objects.

### **CSCI 125 - Computation in the Sciences. 3.000 Credits.**

Offered autumn at the Mountain Campus. Use a high-level structured programming language to study data types, looping and control structures, lists, dictionaries, and file i/o. Use computing and programming to solve scientific problems.

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### **CSCI 126 - Computation in the Sciences with Calculus. 3.000 Credits.**

Offered autumn. Prereq., basic computer and spreadsheet literacy; coreq., M 162 or M 171. An introduction to programming in Python with an emphasis on problems arising in the sciences, including: function plotting, data fitting, file input/output, numerical differentiation and integration, solving ordinary differential equations, matrix manipulation, and sensor networks.

### **CSCI 150 - Introduction to Computer Science. 3 Credits.**

Offered autumn and spring. This course covers basic programming concepts such as variables, data types, iteration, flow of control, input/output, functions, and objects. The course will also cover programming ideas such as libraries, files, modularity, where to turn to for help, and debugging. Students will learn about the role computation can play in solving problems by writing programs to address practical problems. No prior programming experience is expected. (Two hours independent lab per week.)

### **CSCI 151 - Interdisciplinary Computer Science I. 3 Credits.**

Offered autumn and spring. Offered on both Mountain Campus and at Missoula College. Prereq., CSCI 150 or CSCI 100. This course will introduce students to fundamental computer science concepts including functions, libraries and APIs, recursion, data types, optimization, searching and sorting, all while using a high level structured programming language.

### **CSCI 152 - Interdisciplinary Computer Science II. 3 Credits.**

Offered autumn and spring. Offered at both Mountain Campus and Missoula College. Prereq., CSCI 151 or CSCI 126; and M 162 or M 171 or M 172 or M 273 and prereq./coreq., M 151 or consent of instr. Survey of computer science topics including recursion, basic data structures, algorithms, computational theory, computing architecture, and modern software development practices.

### **CSCI 172 - Intro to Computer Modeling. 3.000 Credits.**

Offered autumn and spring. Offered at both Mountain Campus and at Missoula College. Problem solving and data modeling using computer productivity software. Emphasis using spreadsheets and database for data analysis.

### **CSCI 181 - Web Design and Programming. 3 Credits.**

Offered autumn. Students will learn how to critically analyze the usability of web sites and create their own by understanding and applying universal principles of design. Programming and other key concepts covered include HTML, CSS, JavaScript, and Web Graphics. Students will complete many different types of Web projects throughout the semester, culminating in an online portfolio used to showcase work completed in this class and others. No prior programming experience is expected.

### **CSCI 191 - Special Topics. 6.000 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSCI 198 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of

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Internship (198, 298, 398, 498) may count toward graduation.

### **CSCI 205 - Programming with C/C++. 3 Credits.**

Offered spring and fall. Prereq., CSCI 152. Concepts and principles of programming languages with an emphasis on C, C++, and object-oriented programming. Syntax and semantics of object-oriented languages. Principles and implementation of memory allocation and de-allocation, type-checking, scope, polymorphism, inheritance.

### **CSCI 215E - Social & Ethical Issues in CS. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., WRIT 101 (or higher) or equivalent. Exploration of ethical issues in the field of computing. Skills needed to identify and analyze various ethical concerns. Standard ethical concepts and theories, methods of ethical analysis. Strong emphasis on practical application of the ethical process.

Gen Ed Attributes: Ethical & Human Values Course, Writing Course-Intermediate

### **CSCI 221 - System Analysis and Design. 3 Credits.**

Offered spring. Offered at Missoula College. Analysis of the system development life cycle. Emphasis on planning, analyzing, designing, implementing and supporting information systems to meet business requirements. Covers feasibility studies, time and cost estimates, modeling tools, design tools, implementation and support strategies. A simulated business design project will be developed.

### **CSCI 232 - Intermediate Data Structures and Algorithms. 4 Credits.**

Offered autumn. Prereq., 'B-' or better in CSCI 152; or consent of instr. Abstract data types, algorithm analysis, stacks, queues, lists, recursion, trees, hashing, graphs, and applications of data structures in algorithm development. Python programming language used.

### **CSCI 240 - Databases and SQL. 3 Credits.**

Offered autumn. Relational database design including: requirements analysis, data structure, entity relationships, normalization, relational algebra and integrity. Physical implementation focusing on data storage; retrieval and modification; concurrency; optimization; security; SQL; and XML.

### **CSCI 258 - Web Application Development. 3 Credits.**

Offered autumn and spring. Prereq., or coreq., CSCI 152. This class is designed to give students introductory exposure to client-server Web development. Students will be exposed to modern web/software development principles, practices and systems.

### **CSCI 290 - Undergraduate Research. 1-6 Credits.**

(R-10) Offered every term. Offered at Missoula College. Consent of instr. Independent research under the direction of a faculty member.

### **CSCI 291 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSCI 298 - Internship. 1-6 Credits.**



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(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **CSCI 315E - Computers, Ethics, and Society. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Ethical problems that computer scientists face. The codes of ethics of professional computing societies. The social implications of computers, computing, and other digital technologies.

Gen Ed Attributes: Ethical & Human Values Course, Writing Course-Advanced

### **CSCI 322- Advanced Web Application Development. 3 Credits.**

Offered spring. Prereq., CSCI 258 or consent of instr. This course imparts advanced web development and associated practical skills, including contemporary web architectures, cloud deployment, database migrations, custom front end interfaces, high performance computing integration, web systems debugging, and group development.

### **CSCI 323 - Software Science. 3 Credits.**

Offered autumn. Prereq., CSCI 152. Study, implementation, and assessment of software processes, techniques, methods, and CASE tools. Project management and cost estimation techniques will be examined. A group project may be required.

### **CSCI 332 - Advanced Data Structures and Algorithms. 3 Credits.**

Offered spring. Prereq., CSCI 232 and M 225 or consent of instr. Algorithm design, analysis, and correctness. Commonly used algorithms including searching and sorting, string search, dynamic programming, branch and bound, graph algorithms, and parallel algorithms. Introduction to NP-complete problems.

### **CSCI 340 - Database Design. 3 Credits.**

Offered spring. Prereq., CSCI 232 or consent of instr. Fundamentals of data modeling, the relational mode, normal forms, file organization, index structures and SQL. Major project involving the design and implementation of a relational database.

### **CSCI 361 - Computer Architecture. 3 Credits.**

Offered spring. Prereq., CSCI 152 Bottom up creation of a complete computer system. Beginning with logic gates, ALU, CPU, and memory hierarchy. Instruction set design and hardware control. Assembly language and creation of an assembler. Virtual machines and implementation of a virtual machine. High level languages and basic compiler construction.

### **CSCI 370 - Sports Analytics. 3 Credits.**

Offered spring. Prereq., junior or senior standing. This course will discuss how technology is affecting sports and the ethical consequences. Students will be introduced to several computer science topics that are used to analyze all aspects of the sports industry (performance, safety, game strategy, fan experience).

### **CSCI 390 - Research. 1-6 Credits.**

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(R-6) Offered intermittently. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student.

### **CSCI 391 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., junior standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSCI 392 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **CSCI 394 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Guidance in special work.

### **CSCI 398 - Internship. 1-3 Credits.**

(R-3) Offered intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from faculty supervisor and the Internship Services office. Only three credits applicable to computer science major or minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **CSCI 400 - Digital Entrepreneurship. 3 Credits.**

Offered Spring. This course teaches how to successfully launch a high tech startup. Students will learn and apply the skills necessary to adapt their computer science education to the unique challenges of the startup environment, including design and implementation of a product, and requirements gathering via customer discovery. Students will learn how seemingly non-technical challenges (such as financing, intellectual property, group dynamics, and equity) impact technical development. Level: Undergraduate-Graduate

### **CSCI 410 - Advanced Client-side Web Programming. 3 Credits.**

Offered intermittently. Prereq., CSCI 152. Programming and software development techniques for developing client side web-based applications. Scripting and other programming languages that are used for client-side web-based development.

### **CSCI 411 - Advanced Web Programming. 3 Credits.**

Offered intermittently. Prereq., CSCI 152. Programming and software development techniques for developing web-based applications. Scripting and other programming languages that are used for web-based development.

### **CSCI 412 - Game and Mobile Applications. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 and 323. Programming and software development techniques for developing gaming and mobile applications. Multiple gaming environments and mobile programming languages are introduced and examined to build modern applications.

### **CSCI 426 - Software Design and Development I. 3 Credits.**

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Offered autumn. Prereq., CSCI 323, or consent of instr. Students should be of Senior class standing. Class represents first in senior capstone experience. Students will work in groups to design and prototype real-world software. Focus will be on client interaction, software engineering methodologies, project management tools, requirements specification and analysis, design, user feedback, documentation and presentation.

### **CSCI 427 - Software Design and Development II. 3 Credits.**

Offered spring. Prereq., CSCI 426. Design and implementation of a major software project in a group setting, with required documentation, presentation, installation, and approval by the instructor.

### **CSCI 432 - Advanced Algorithm Topics. 3 Credits.**

Offered autumn. Prereq., 'B-' or better in CSCI 332; or consent of instr. Advanced algorithm and data structure concepts, including theory, approximation algorithms, randomized algorithms, parallel algorithms, streaming algorithms, linear programming. Co-Convenes with CSCI 532.

### **CSCI 441 - Computer Graphics Programming. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 and M 221 or consent of instr. The graphics pipeline, its implementation in hardware and emphasis on the programmable portions of the pipeline. Matrix transformations for modeling, viewing, clipping, and windowing. Application of lighting, coloring, and texturing models. Hierarchical modeling of objects. Programmable shaders. OpenGL and WebGL.

### **CSCI 442 - Computer Vision. 3 Credits.**

Offered intermittently. Prereq., M 221 and CSCI 232, or consent of instructor. Introducing how digital images can be used for quantitative analysis and in artificial intelligence. Topics include the fundamentals of image formation and optics, the geometry of images, feature detection and matching, stereo vision and photogrammetry, tracking, and object detection and classification. Course co-convenes with CSCI 552. Credit not allowed for both CSCI 442 and CSCI 552.

### **CSCI 443 - User Interface Design. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 or consent of instr. Introduction to usability and key concepts of human behavior. Focus on the process of user-centered design, including requirements specification, prototyping, and methods of evaluation. Incorporation of regular design critiques of classmates' work, and emphasis on both oral and written communication skills. Credit not allowed for CSCI 543 and this course.

### **CSCI 444 - Data Visualization. 3 Credits.**

Offered intermittently. Prereq., M 171; programming experience; and junior, senior, or graduate status; or consent of instr. This course emphasizes the practice of data visualization, compelling students to identify and master tools to produce visualizations of data having relational, raster, vector, geographical, networked, mesh based, spectral, or phase space properties. The unique challenges of each data type will be covered. The emphasis on production is coupled to a framework for critique, allowing students to differentiate between high and low qualities visualizations.

### **CSCI 446 - Artificial Intelligence. 3 Credits.**

Offered intermittently. Prereq., M 225 or M 307, and CSCI 232, or consent of instr. Using computers and software to solve problems that require intelligence. Specific topics may include knowledge representation, logical and probabilistic reasoning, machine learning, planning, game playing, information retrieval,

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computer vision, and robotics.

### **CSCI 447 - Machine Learning. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 or consent of instr. Introduction to the framework of learning from examples, various learning algorithms such as neural networks, and generic learning principles such as inductive bias, Occam's Razor, and data mining. Credit not allowed for both CSCI 447 and CSCI 547.

### **CSCI 448 - Pattern Recognition. 3 Credits.**

Offered intermittently. Prereq., Junior or Senior status. Introduction to the framework of unsupervised learning techniques such as clustering (agglomerative, fuzzy, graph theory based, etc.), multivariate analysis approaches (PCA, MDS, LDA, etc.), image analysis (edge detection, etc.), as well as feature selection and generation. Emphasis will be on the underlying algorithms and their implementation. Credit not allowed for both CSCI 448 and CSCI 548.

### **CSCI 451 - Computational Biology. 3 Credits.**

Offered Autumn. Designed for attendance by both computer scientists and biologists. The course will explore the interdisciplinary nature at the juncture of the two fields. Students will be introduced to bioinformatics (emphasis: computational genomics), with exposure to fundamental problems, algorithms, and tools in the field. This includes a basic introduction to genomics, along with in-depth coverage of algorithms and methods relevant to modern computational genomics, including: biological sequence alignment, sequence database homology search, and phylogeny inference. The programming expectations are limited for a 400-level computer science course, but at least one semester of a programming-intensive course is required. Credit not allowed for CSCI 558 and this course

### **CSCI 460 - Operating Systems. 3 Credits.**

Offered autumn. Prereq., CSCI 232, or consent of instr. Operating system design principles. Processes, threads, synchronization, deadlock, memory management, file management and file systems, protection, and security, comparison of commonly used existing operating systems, writing programs that make use of operating system services. It is recommended, but not required, that the student also attend Programming Languages (in order to be prepared to write C programs) and Architecture (in order to understand interactions between the operating system and processor hardware) prior to attending this course.

### **CSCI 464 - Applications of Mining Big Data. 3 Credits.**

Offered intermittently. Prereq., upper division or consent of instr. Co-convenes with CSCI 564. Introduction to existing data mining software systems and their use, with focus on practical exercises. Topics include data acquisition, data cleansing, feature selection, and data analysis. Credit not allowed for both CSCI 464 and CSCI 564.

### **CSCI 466 - Networks. 3 Credits.**

Offered spring. Prereq., CSCI 232. Concepts and practice of computer networking, network protocol layers, switching, routing, flow, and congestion control. Network programming.

### **CSCI 475 - Software Optimization. 3 Credits.**

Offered autumn. Prereq., B- or better in CSCI 232 (or consent of instr.). Passing by reference, bit twiddling, cache awareness, memory allocation, compiler optimizations, template recursion, optimizing out expensive mathematical functions, and more in the same vein to achieve higher performance C++11 code. C++11

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programming language used. Co-Convenes with CSCI 575. Level: Undergraduate

### **CSCI 476 - Computer Security. 3 Credits.**

Prereq., M 225. Introduction to computer security. Understand the basis of cryptography and secure systems, as well as exploits used to penetrate such systems.

### **CSCI 477 - Simulation. 3 Credits.**

Co-convene with CSCI 577. Prereq., M 172, CSCI 151, or consent of instr. Matrix languages. ODE solving; Euler-Richardson, Runge-Kutta, PDE solving; finite differences, finite elements, multi-grid techniques. Discrete methods for solution, renormalization group method, critical phenomena. Emphasis on presentation of results and interactive programs. Credit not allowed for CSCI 577 and this course.

### **CSCI 480 - Applied Parallel Computing Techniques. 3 Credits.**

Prereq., CSCI 205 and 232, or instructor consent. This course is an introduction to parallelism and parallel programming. Topics include the various forms of parallelism on modern computer hardware (e.g. SIMD vector instructions, GPUs, multiple cores, and networked clusters), with coverage of locality and latency, shared vs non-shared memory, and synchronization mechanisms (locking, atomicity, etc). We will introduce patterns that appear in essentially all programs that need to run fast. We will discuss how to recognize these patterns in a variety of practical problems, discuss efficient algorithms for implementing them, and how to compose these patterns into larger applications. We will address computer architecture at a high level, sufficient to understand the relative costs of operations like arithmetic and data transfer. We also introduce useful tools for debugging correctness and performance of parallel programs. Assignments will include significant parallel programming projects. Co-convenes with CSCI 580. Credit not allowed for both CSCI 480 and CSCI 580.

### **CSCI 490 - Research. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student.

### **CSCI 491 - Special Topics. 1-6 Credits.**

(R-18) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSCI 492 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **CSCI 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Guidance in special work.

### **CSCI 498 - Internship. 1-3 Credits.**

(R-3) Offered Intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Only three credits of CSCI 398 and/or CSCI 498 applicable to computer science major or minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

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### **CSCI 499 - Senior Thesis/Capstone. 1-6 Credits.**

(R-6) Offered every term. Prereq., WRIT 101 or equivalent, and one intermediate writing course and consent of thesis/project director and chair of the Computer Science Department. Senior thesis for computer science majors and/or Watkins scholars.

Gen Ed Attributes: Writing Course-Advanced

### **CSCI 501 - Graduate Research Methods. 3 Credits.**

Offered autumn. Prereq., Non-probationary graduate status. Development of the skills required for effective research in Computer Science, including literature review, research proposal development, oral and visual presentation techniques. Included is mandatory attendance of a colloquium featuring presentations from UM faculty and students as well as external researchers from academics and industry. Level: Graduate

### **CSCI 510 - Advanced Client-side Web Programming. 3 Credits.**

Offered intermittently. Prereq., CSCI 152. Programming and software development techniques for developing client side web-based applications. Scripting and other programming languages that are used for client-side web-based development. Level: Graduate

### **CSCI 532 - Advanced Algorithm Topics. 3 Credits.**

Offered autumn. Prereq., 'B-' or better in CSCI 332; or consent of instr. Advanced algorithm and data structure concepts, including theory, approximation algorithms, randomized algorithms, parallel algorithms, streaming algorithms, linear programming. Co-Convenes CSCI 432.

### **CSCI 543 - Human-Computer Interaction. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 or consent of instr. Principles of good design for interactive systems and web-based applications. User-centered design methodology including requirements specification, low and high-fidelity prototyping, heuristic evaluation, cognitive walkthrough, predictive modeling, and usability testing. Advanced HCI research project. Credit not allowed for both CSCI 443 and CSCI 543. Level: Graduate

### **CSCI 547 - Machine Learning. 3 Credits.**

Offered intermittently. Prereq., CSCI 232 or consent of instr. Fundamentals of machine learning including neural networks, decision trees, Bayesian learning, instance-based learning, and genetic algorithms; inductive bias, Occam's razor, and learning theory; data mining; software agents. Credit not allowed for CSCI 447 and CSCI 547. Level: Graduate

### **CSCI 548 - Pattern Recognition. 3 Credits.**

Offered intermittently. Introduction to the framework of unsupervised learning techniques such as clustering (agglomerative, fuzzy, graph theory based, etc.), multivariate analysis approaches (PCA, MDS, LDA, etc.), image analysis (edge detection, etc.), as well as feature selection and generation. Techniques in exploratory data analysis when faced with large, multivariate datasets. Opportunities at implementation of some algorithmic approaches as well as use of preexisting tools such as the R-project statistics package. Emphasis will be on the underlying algorithms and their implementation. Credit not allowed for both CSCI 448 and CSCI 548. Level: Graduate

### **CSCI 552 - Computer Vision. 3 Credits.**

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Offered intermittently. Prereq., M 221 and CSCI 232, or consent of instructor. Introducing how digital images can be used for quantitative analysis and in artificial intelligence. Topics include the fundamentals of image formation and optics, the geometry of images, feature detection and matching, stereo vision and photogrammetry, tracking, and object detection and classification. Course co-convenes with CSCI 442. Credit not allowed for both CSCI 442 and CSCI 552. Level: Graduate.

### **CSCI 555 - Topics Artificial Intelligence. 3 Credits.**

Offered intermittently. Prereq., M 225 or M 307, and CSCI 232, or consent of instr. The study and design of artificial intelligent agents. Specific topics may include knowledge representation, logical and probabilistic reasoning, machine learning, planning, game playing, information retrieval, computer vision, and robotics. Level: Graduate

### **CSCI 558 - Intro to Bioinformatics. 3 Credits.**

Offered autumn. Designed for attendance by both computer scientists and biologists. The course will explore the interdisciplinary nature at the juncture of the two fields. Students will be introduced to bioinformatics (emphasis: computational genomics), with exposure to fundamental problems, algorithms, and tools in the field. This includes a basic introduction to genomics, along with in-depth coverage of algorithms and methods relevant to modern computational genomics, including: biological sequence alignment, sequence database homology search, and phylogeny inference. The programming expectations are limited for a 500-level computer science course, but at least one semester of a programming-intensive course is required. A substantial project is a key component of the course. Level:

### **CSCI 564 - Applications of Mining Big Data. 3 Credits.**

Offered intermittently. Co-convenes with CSCI 464. Introduction to existing data mining software systems and their use, with focus on practical exercises. Topics include data acquisition, data cleansing, feature selection, and data analysis. Credit not allowed for both CSCI 464 and CSCI 564. Level: Graduate

### **CSCI 574 - Computer Security. 3 Credits.**

Prereq., M 225, CSCI 332, and CSCI 332. Understand and apply cryptosystems, penetration testing, and fundamental exploits.

### **CSCI 575 - Software Optimization. 3 Credits.**

Offered autumn. Prereq B- or better in CSCI 232 (or consent of instr.). Advanced coverage of passing by reference, bit twiddling, cache awareness, memory allocation, compiler optimizations, template recursion, optimizing out expensive mathematical functions, and more in the same vein to achieve higher performance C++11 code. C++11 programming language used. Co-Convenes with CSCI 475. Level: Graduate

### **CSCI 577 - Simulation Modeling. 3 Credits.**

Co-convene with CSCI 477. Prereq., M 172, CSCI 151, or consent of instr. Matrix languages. ODE solving; Euler-Richardson, Runge-Kutta, PDE solving; finite differences, finite elements, multi-grid techniques. Discrete methods for solution, renormalization group method, critical phenomena. Emphasis on presentation of results and interactive programs. Conduct, document, and present graduate level research involving computer simulation methods. Credit not allowed for CSCI 477 and this course. Level: Graduate

### **CSCI 580 - Applied Parallel Computing Techniques. 3 Credits.**

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Offered intermittently. Prereq., CSCI 232, 205. Parallel processing architectures and programming languages. Co-convenes with CSCI 580. Credit not allowed for both CSCI 480 and CSCI 580. Level: Graduate

### **CSCI 590 - Research. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **CSCI 591 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offering of current topics. Level: Graduate

### **CSCI 592 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **CSCI 594 - Graduate Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Seminar on current research topics in computer science. Level: Graduate

### **CSCI 595 - Practicum. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Organized field experience.

### **CSCI 598 - Internship. 1-9 Credits.**

(R-3) Offered intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from faculty supervisor and the Internship Services office. Only three credits applicable to computer science major or minor. Level: Graduate

### **CSCI 599 - Thesis/Project. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Research for and preparation of the master thesis or professional paper. Level: Graduate



## Construction Trades (CSTN)

### **CSTN 120 - Carpentry Basics & Rough-In Framing. 5 Credits.**

Offered autumn. Offered at Missoula College. Introduction to the carpentry trade, including history, career opportunities, and requirements. The course covers building materials, fasteners, adhesives, hand tools, and power tools. OSHA rules and regulations for a safe working place and procedures for compliance are covered. This course includes a two-credit imbedded lab. Students will also learn how to install windows and an exterior door.

### **CSTN 122 - Beginning Carpentry Lab. 5 Credits.**

Offered at Missoula College. Lab to support CSTN 120.

### **CSTN 142 - Interior & Exterior Finish Carpentry. 4 Credits.**

Offered spring. Offered at Missoula College. Study of various types of siding, gutter systems, roof venting requirements, and framing with metal studs. Installation of sheathing, exterior siding, roofing felt, shingles, insulation vapor barriers, and stairs on small building constructed in CSTN 120. Installation of wood and metal doors. Demonstration of materials, layout and installation of suspended ceilings. Selection and installation of countertops, base cabinets and wall cabinets. Window, door, floor, ceiling trim and drywall are installed in a small building. This course includes a one-credit imbedded lab.

### **CSTN 143 - Intermediate Carpentry Lab. 4 Credits.**

Offered at Missoula College. Lab to accompany CSTN 142. Prereq., CSTN 120 and CSTN 122.

### **CSTN 171 - Site Prep, Foundation, and Concrete Installation. 3 Credits.**

Offered autumn. Offered at Missoula College. Introduces the process of distance measurement as well as differential and trigonometric leveling for site layout. It covers the principles, equipment, and methods used to perform the site layout tasks that require making angular measurements. This course is designed to let students apply the blueprint reading skills learned so far to a practical exercise.

### **CSTN 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSTN 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **CSTN 205 - Advanced Carpentry Lecture. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., 120, 122, 142, and 143. Study of the process for angular measurement, using transits, theodolites, electronic distance measuring devices, lasers, and trigonometric calculating to lay out foundations and determine elevations. Installation of standing seam, lap seam, and built-up roofing systems; concrete, vinyl, wooden, tile, and carpeted floors as well as radiant heating; paneling, wainscoting, movable partitions, curtain walls and fire-rated commercial wall construction.

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Advanced stair systems, including shop built and prefabricated stairs, balustrades, mitered risers and treads, and layout of elliptical fastening methods, and assembly techniques. Project planning, scheduling, estimating, and management skills included. This course includes a two-credit lab.

### **CSTN 206 - Advanced Carpentry Lab. 2 Credits.**

Offered at Missoula College. Laboratory to accompany CSTN 205. Prereq., 120, 122, 142, and 143.

### **CSTN 261 - Building Management. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq: CSTN 120, 122, 142, 143, 171. Introduction to building business and project management including overhead costs, payroll costs, estimating and scheduling. Covers elements of payroll computation and preparation, payroll tax returns, information returns, and identification and compensation of independent contractors. Students are introduced to building cost estimating, and scheduling of subcontractors and building inspections. This course includes a one-credit imbedded lab.

### **CSTN 278 - Applied Building Practices Lab. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., 120, 122, 142, 143. Students work on a variety of projects either at the college or in the community to practice and develop their skills as well as learn new skills. Knowing and following OSHA rules and regulations is emphasized. Students are expected to produce a professional quality product.

### **CSTN 279 - Commercial Construction. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CSTN 120, 122, 142, 143, and 171. Study and develop skills in metal stud framing, commercial roofing systems, metal and masonry buildings, metal doors and door hardware, suspended ceilings, and fire rated commercial walls.

### **CSTN 282 - Green Building Concept & Design I. 4 Credits.**

Offered autumn. Offered at Missoula College. This course takes a holistic approach to natural resource conservation and energy efficiency in the construction industry. From integrated design, building site selection and evaluation, through building design, material selection and efficiencies, passive heating and cooling, and construction techniques. Students design an energy efficient residence to be built by next years class.

### **CSTN 283 - Green Building Concept & Design II. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CSTN 282. A course fee of \$50.00 is required. This course builds on concepts learned in CSTN 282 Green Building Concepts and Design I. Students learn how to weatherize existing buildings and green remodeling and preservation techniques, design and build outdoor living spaces, and green landscaping practices. They learn how to document building for green rating for both NAHB Standards and LEED. They will conduct blower door tests and learn to test for and mitigate radon gas. Students will also refine the energy efficient residential plan they produced in Green Building Concepts and Design I.

### **CSTN 286 - Advanced Wood Buildings. 3 Credits.**

Offered spring. Offered at Missoula College. Curriculum will provide current and future industry participants education in the history, benefits, sourcing, design, products, applications and techniques in modern and emerging wood and wood frame construction. It will further showcase the inherent qualities of

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responsibly sourced wood as a rapidly renewable resource in single family residential, low rise multifamily, mixed use commercial and high rise buildings and inform both current practitioners and future industry workforce members on the products, techniques and tools in wood building construction that provide the maximum economic and sustainable benefits.

### **CSTN 291 - Special Topics. 3-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CSTN 295 - Practicum. 1-3 Credits.**

(R-3) Offered spring. Offered at Missoula College. The course will be an elective for all students within the Sustainable Construction Technology Program and a requirement for any student pursuing a CTS in Green Building. The practicum will allow students to apply concepts learned in CSTN 282 Green Building and Design I, CSTN 283 Green Building and Design II, and CSTN 261 Building Management in a hands on project, research activity or other relevant designated undertaking.

### **CSTN 298 - SCT Internship. 1-6 Credits.**

(R-6) Offered at Missoula College. Extended classroom experience which provides practical application of classroom learning. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **CSTN 299 - Capstone: Carpentry. 2 Credits.**

Offered autumn. Offered at Missoula College. Capstone laboratory to accompany CSTN 120, 122, 142, 143, 205, 206, and 261. This course provides hands-on experience in which the student applies the skills and knowledge presented in the Carpentry Program. The course will emphasize advanced application in the areas of exterior finishing and interior finishing, and other constructed topics.

## Counselor Education (COUN)

### **COUN 195 - Career Development. 1-6 Credits.**

Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COUN 242S - Intimate Relationships. 3 Credits.**

Offered autumn and spring semester. This course covers the fascinating, multi-faceted world of intimate relationships and explores the topic from empirical and theoretical perspectives. The examination of intimate relationships in this course will look at the subject through cultural, biological, social and developmental lenses and will explore specific topics such as attraction, communication, friendship, sexuality, love, conflict, power and violence, loss, social cognition, and repairing relationships.

Gen Ed Attributes: Social Sciences Course (S)

### **COUN 390 - Supervised Research. 1-3 Credits.**

### **COUN 395 - Special Topics. 1-9 Credits.**

Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COUN 475 - Forgiveness & Reconciliation. 3 Credits.**

Offered spring. Survey of the theory and practice of healing fractured relationships at the individual and community levels, treating historical and personal issues from philosophical, psychological and religious perspectives drawn from several diverse cultures.

### **COUN 495 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **COUN 510 - Introduction to Counseling. 1 Credit.**

Course is designed to prepare school and mental health counselors-in-training to gain an understanding of the counseling field and begin developing professional identity. Much of the material introduced in this course will be developed in greater detail in later courses. This course is an overview that prepares the student for his or her professional identity and activities. Level: Graduate

### **COUN 511 - Theories & Technology of Counseling. 3 Credits.**

Offered autumn. Examination of historic and current theories of counseling. Overview of techniques associated with each theory. Basic introduction to ethical concerns with each theory. Level: Graduate

### **COUN 512 - Counseling Fundamentals. 3 Credits.**

Offered autumn. Prereq., COUN 511. Overview of approaches to counseling, including common factors. Includes meta-theoretical considerations and guided dyadic practice. Level: Graduate

### **COUN 520 - Group Counseling & Guidance. 3 Credits.**

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Offered spring. Prereq., COUN 511. Theories, approaches, and methods for group counseling and guidance. Level: Graduate

### **COUN 530 - Applied Counseling Skills. 3 Credits.**

Offered autumn and spring. Prereq., COUN 511, COUN 512 and consent of instr. Review and application of counseling theories and techniques to client issues. Intensive supervision including ethics, professional practice and diagnostic considerations. Lecture and class presentation with a focus on professional counseling development. Level: Graduate

### **COUN 540 - Individual Appraisal. 3 Credits.**

Offered fall. Prereq., undergraduate statistics course or consent of instructor. Overview of appraisal techniques utilized in counseling, including interviewing, observation, and psychological/educational testing. The processes of selection, administration, scoring, interpretation, and reporting information from appraisal techniques are examined in relation to practical, legal, and ethical considerations. Level: Graduate

### **COUN 545 - Counseling Research & Progress Evaluation. 3 Credits.**

This course provides an overview and analysis of quantitative and qualitative research approaches used within the professional counseling discipline. A focus on understanding key research concepts (e.g., internal validity, external validity) within the context of contemporary research publications in counseling is emphasized. Level: Graduate

### **COUN 550 - Introduction to Family Counseling. 3 Credits.**

Offered spring. Prereq., admission to Counselor Education program or consent of instr. An introduction to the major theories, techniques, and diagnostic tools of family counseling. Course includes a family systems emphasis. Level: Graduate

### **COUN 555 - Risk & Resiliency. 3 Credits.**

Offered spring. The course is a required course in the graduate Department of Counseling's Clinical Mental Health Counseling and School Counseling programs.

### **COUN 560 - Lifespan Developmental Counseling. 3 Credits.**

Offered summer only. Overview of counseling from the framework of lifespan developmental theory. Normal and abnormal development in the environmental context of family, school, society and culture emphasized. Level: Graduate

### **COUN 565 - School Counseling, Program Development, & Supervision. 3 Credits.**

Offered spring. Prereq., graduate standing or consent of instr. Examination of counseling techniques and approaches relevant to prevention and remediation of behavioral, social, emotional and academic problems for students P-12. Overview of school counseling program development and administration. Level: Graduate

### **COUN 566 - Counseling Children & Adolescents. 3 Credits.**

Offered spring. Prereq., COUN 511, 512, 565 or consent of instr. Review and application of counseling concerns and approaches with children and adolescents in school and related educational settings, including classroom and psychoeducational strategies. Level: Graduate

### **COUN 570 - Career Counseling Theory & Technology. 3 Credits.**

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Offered summer only. Examination of theories of career choice and development; information sources for career counseling; techniques and approaches of career counseling with clients at different stages of career and life development and from diverse populations. Level: Graduate

### **COUN 575 - Multicultural Counseling. 3 Credits.**

Offered summer only. Prereq., graduate standing or consent of instr. An introduction to the field of multicultural counseling. Issues and practical considerations in counseling five population groups; definition of terms and concepts. Level: Graduate

### **COUN 585 - Counseling Methods: School & Agency. 1-9 Credits.**

Offered every term. Prereq., COUN 511, 512. Supervised counseling methods and theories as applied in mental health agencies and schools. Review of the principles of counseling as these apply to various settings and client issues. Level: Graduate

### **COUN 589 - Comprehensive Project. 1 Credit.**

Offered autumn and spring. Integration of professional experience and academic research in a comprehensive paper or applied project. Students may elect to have an oral and written examination covering the eight CACREP core areas of counseling. Level: Graduate

### **COUN 594 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Group analysis of problems in specific areas of professional counseling. Level: Graduate

### **COUN 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **COUN 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **COUN 597 - Research. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **COUN 610 - Profess Ethics/Orient. 3 Credits.**

Offered fall. Prereq., COUN 530 or consent of instr. The public and institutional roles and responsibilities of counseling professionals including ethical and legal responsibilities. Level: Graduate

### **COUN 615 - Diagnosis/Treatment Planning in Counseling. 3 Credits.**

Offered spring. Prereq., COUN 512. Overview of diagnosis, treatment planning and case documentation in counseling. Level: Graduate

### **COUN 620 - Advanced Counseling Theories. 3 Credits.**

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Offered every other spring. Prereq., COUN 511. This course provides an overview and analysis of evidence based treatments in counseling. There is a focus on cognitive-behavioral treatments for specific disorders as well as acceptance and commitment therapy and principles of evidence-based relationships. Practical application of these approaches is emphasized. Level: Graduate

### **COUN 625 - Introduction to Mental Health Systems. 3 Credits.**

Prereq., acceptance into Counselor Education program mental health track. Essential knowledge for professional identity, understanding of public policy, and community assessment procedures. Includes brief lectures, guest speakers, discussion, and student presentations. Level: Graduate

### **COUN 630 - Doctoral Clinical Practice. 3 Credits.**

Doctoral level clinical experience of 100 supervised hours focusing on the counseling relationship, including case conceptualization and therapeutic skills from a variety of theoretical perspectives. Additional areas of focus are ethical considerations and the assessment of professional counseling outcomes. Level: Graduate

### **COUN 635 - Clinical Supervision Practice. 3 Credits.**

Offered every other fall. Introduction to clinical supervision. Includes professional supervision standards, theory, modalities, settings, ethical and legal issues. Course includes supervision of doctoral student supervision experiences.

### **COUN 640 - Professional Leadership and Scholarly Development. 3 Credits.**

Offered every other spring. Theories of academic leadership, within professional trends, political and social contexts. Includes developing awareness of scholarly opportunities, including preparation of a professional counseling organization conference proposal. Level: Graduate

### **COUN 650 - Pedagogy and the Professorate. 3 Credits.**

Offered every other spring. Consideration of pedagogy including teaching, learning, governance, curriculum development, assessment and evaluation. Includes knowledge of accreditation processes, personal and professional challenges of faculty life and exploration of doctoral level career paths. Level: Graduate

### **COUN 670 - Doctoral Comprehensive Exam. 2 Credits.**

Offered every semester. Students will successfully complete four doctoral Comprehensive Examination Essays read by all members of the student's Doctoral Comps Committee. At least one of the essays is to be submitted for publication. Level: Graduate

### **COUN 674 - Qualitative Research I. 3 Credits.**

Offered autumn. Enrollment in Department of Counseling doctoral program or closely related field of doctoral study required.

### **COUN 675 - Qualitative Research II. 3 Credits.**

Offered autumn. Enrollment in Department of Counseling doctoral program or closely related field of doctoral study required.

### **COUN 685 - Methods in Counselor Education and Professional Counseling. 1-9 Credits.**

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(R-18) Offered every semester. Supervised advanced counselor education methods and approaches that address the professional leadership roles of counselor education, including realms of teaching and advising, clinical supervision, scholarly work and professional counseling practice. Level: Graduate

### **COUN 695 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **COUN 699 - Thesis/Dissertation. 1-9 Credits.**

(R-10) Offered every semester. Prereq., EDLD 620 or 625. Preparation of a dissertation, thesis, professional paper, or manuscript based on research for presentation and/or publication. Credit/No Credit grading only. Level: Graduate



## Creative Pulse (CP)

**CP 582 - Arts Education Seminar I. 1-2 Credits.**

(R-4) Same as MUSE 582. Offered summers. Topics vary. Level: Graduate

**CP 583 - Arts Education Seminar II. 1-2 Credits.**

(R-4) Prereq., CP 582. Same as MUSE 583. Continuation of CP 582. Level: Graduate

**CP 584 - Graduate/Research Studio Practice: Photo. 1-2 Credits.**

(R-4) Offered summer. Prereq., CP 583. Same as MUSE 584. Continuation of CP 583. Level: Graduate

**CP 585 - Arts Education Seminar IV. 1-2 Credits.**

(R-4) Prereq., CP 584. Same as MUSE 585. Continuation of CP 584. Level: Graduate

**CP 587 - Arts Education Practicum. 2 Credits.**

(R-8) Continuation and synthesis of preceding seminars. Level: Graduate

**CP 588 - Creative Pulse Apprenticeship. 1-3 Credits.**

(R-24) Offered summer. Same as MUSE 588. Exploration of art forms to develop new artistic and communicative perceptions and awareness. Level: Graduate

**CP 589 - Arts Education Field Project. 1 Credit.**

(R-4) Offered summer. Creative/research activities. Level: Graduate

**CP 596 - Independent Study. 1-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

**CP 597 - Research. 1-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

**CP 599 - Professional Paper. 1-4 Credits.**

(R-4) Offered autumn and spring. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

## Creative Writing (CRWR)

### **CRWR 115L - Montana Writers Live. 3 Credits.**

(R-6) Offered autumn. Open to all majors. An introduction to Montana's practicing creative writers and their work through reading, live performances and discussion. Regional poets and prose writers will read from their work and lead class discussion. Students prepare questions developed from readings and criticism.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **CRWR 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CRWR 210A - Introductory Fiction Workshop. 3 Credits.**

Offered intermittently. Offered on Mountain Campus and at Missoula College. This beginning writing workshop emphasizes the reading, discussion, and revision of students' short fiction. Students will be introduced to the technical elements of writing fiction. No prior experience in writing short fiction required.

Gen Ed Attributes: Expressive Arts Course (A)

### **CRWR 211A - Introductory Poetry Workshop. 3 Credits.**

Offered intermittently. This beginning writing workshop focuses on the reading, discussion, and revision of students' poems. Students will study and use models of poetic techniques. No prior experience in writing poetry required.

Gen Ed Attributes: Expressive Arts Course (A)

### **CRWR 212A - Introductory Nonfiction Workshop. 3 Credits.**

A study of the art of nonfiction through reading and responding to contemporary nonfiction and the writing of original nonfiction works. Focus is on creative expression, writing technique and nonfiction forms. Students begin with writing exercises and brief essays, advancing to longer forms as the semester progresses.

Gen Ed Attributes: Expressive Arts Course (A)

### **CRWR 234 - The Oval: Literary Magazine. 3 Credits.**

(R-6) Offered Spring, Mountain Campus. This course is open to undergraduates who have completed at least one semester of creative writing. Students focus on the editing, design, layout and marketing of The Oval, University of Montana's undergraduate literary magazine. Students will read, discuss and develop responses to to recognized literary works, as well as developing criteria for each volume's content and design. The class will include the evaluation and selection of fiction, nonfiction, poetry and visual art submissions to The Oval. Students are required to keep a reading journal, and compile a portfolio of writing exercises, responses to texts and critiques of published works.

### **CRWR 240A - Introduction to Creative Writing Workshop. 3 Credits.**

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Offered intermittently. Offered at Missoula College. Beginning writing workshop designed for students to explore genres of creative writing with opportunities for students to write, and revise using genre-specific writing techniques.

Gen Ed Attributes: Expressive Arts Course (A)

### **CRWR 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CRWR 310 - Intermediate Fiction Workshop. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., completion of CRWR 210A with a "B" average or better. An intermediate fiction writing workshop. Students will be expected to finish 3 or 4 substantial stories for the course. Although some outside material will be considered, the primary emphasis will be analysis and discussion of student work.

### **CRWR 311 - Intermediate Poetry Workshop. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., Completion of CRWR 211A with a "B" average or better. An intermediate workshop involving critical analysis of students' work-in-progress as well as reading and discussion of poems in an anthology. Numerous directed writing assignments, experiments, exercises focused on technical considerations like diction, rhythm, rhyme, and imagery.

### **CRWR 312A - Intermediate Nonfiction Workshop. 3 Credits.**

(R-9) Prereq., completion of CRWR 212A or CRWR 210A with a "B" average or better. An intermediate nonfiction workshop. Students read and respond to model essays, in addition to creating and revising original essays for workshop review. Assignments and exercises focus on writing craft and research techniques.

Gen Ed Attributes: Expressive Arts Course (A)

### **CRWR 320 - The Art and Craft of Revision. 3 Credits.**

(R-6) Offered spring. Prereq., CRWR 210A or consent of instr. An intermediate writing course focused on revision of prose works-in-progress and study of narrative, plot, and editing at the language level. Materials include craft manuals, contemporary and classic examples, and student manuscripts.

### **CRWR 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CRWR 392 - Independent Study. 1-3 Credits.**

### **CRWR 398 - Internship. 1-3 Credits.**

(R-9) Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services Office.

### **CRWR 410 - Advanced Fiction Workshop. 2-3 Credits.**

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(R-6) Offered autumn and spring. Prereq., junior standing and CRWR 310. An advanced writing workshop in which student manuscripts are read and critiqued. Rewriting of work already begun (in CRWR 310 classes) will be encouraged.

### **CRWR 411 - Advanced Poetry Workshop. 2-3 Credits.**

(R-6) Offered autumn and spring. Prereq., junior standing and CRWR 311. An advanced writing workshop involving critical analysis of students' work-in-progress, as well as reading and discussion of poems by established poets. Discussions will focus on structure and stylistic refinement, with emphasis on revision. Different techniques, schools and poetic voices will be encouraged. Frequent individual conferences.

### **CRWR 412 - Advanced Nonfiction Workshop. 3 Credits.**

(R-6) Offered autumn and spring. Prereq., junior standing and CRWR 312A. An advanced creative writing workshop focused primarily on reading and writing nonfiction; some classes may focus on personal essay, narrative nonfiction or short forms. Students complete two substantial essays.

### **CRWR 424 - Creative Writing: Nonfiction, New West: From This Point. 3 Credits.**

Offered spring. Nonfiction writing course offered in partnership with the New West Certificate Program. Participants will explore and choose an exact geographical point from which to formulate and develop a question at issue. Working individually and collaboratively, writers will conduct field, primary, and secondary research and draft, revise, and edit an original work focused on natural and human history and incorporating physical and cultural geography.

### **CRWR 425 - Storytelling. 3 Credits.**

This course is open to both undergraduate and graduate students, and is not limited to English majors. In-class exercises and out-of-class assignments are designed to help students identify, develop, and demonstrate effective narrative practices in their chosen fields. Students learn to recognize and identify unifying themes, motifs, and ideas in literature and oral stories. Students will read, write, edit and present stories to the class, as well as providing a critique of their peers' work.

### **CRWR 480 - Fiction Capstone. 3 Credits.**

Offered autumn or spring. Prereq., at least 3 upper division writing workshops with no lower than a B grade and must be senior level. The BFA capstone is the ultimate course for students prior to graduation. This is a hands-on course, a mentorship, though some elements maybe be offered electronically. Level: Undergraduate

### **CRWR 481 - Poetry Capstone. 3 Credits.**

Offered autumn or spring. Prereq., at least 3 upper division writing workshops with no lower than a B grade and must be senior level. The poetry capstone is the ultimate course for students receiving a BFA with a poetry emphasis. This is a hands-on mentoring course that may use some electronic components. Level: Undergraduate

### **CRWR 482 - Nonfiction Capstone. 3 Credits.**

Offered autumn or spring. Prereq., at least 3 upper division creative writing workshops with no lower than a B grade and must be senior level. The nonfiction capstone is the ultimate course for students receiving a BFA with a nonfiction emphasis. This is a hands-on mentoring course that may use some electronic components. Level: Undergraduate

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### **CRWR 491 - Special Topics. 1-6 Credits.**

(R-6) Offered Intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CRWR 492 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair, and junior or senior standing. Special projects in creative writing. Only one 492 may be taken per semester.

### **CRWR 496 - Service Learning. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair, and junior or senior standing. Special projects in creative writing. Only one 496 may be taken per semester.

### **CRWR 510 - Fiction Workshop. 1-15 Credits.**

(R-15) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **CRWR 511 - Poetry Workshop. 1-15 Credits.**

(R-15) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **CRWR 512 - Nonfiction Workshop. 1-15 Credits.**

(R-15) Offered autumn and spring. Prereq., consent of instr. A creative writing workshop focused primarily on personal essay and narrative nonfiction. Attention given to writing and publishing professional magazine essays. Students complete two substantial essays. Level: Graduate

### **CRWR 513 - Techniques of Nonfiction. 1-6 Credits.**

(R-6) Offered once every 2 years. Prereq., consent of instr. Study of form, technique and style in contemporary nonfiction. Level: Graduate

### **CRWR 514 - Techniques of Modern Fiction. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Intensive reading of contemporary prose writers. Level: Graduate

### **CRWR 515 - Traditional Prosody. 3 Credits.**

Offered intermittently. Prereq., consent of instr. Intensive practice and readings in prosodic and other poetic techniques. Level: Graduate

### **CRWR 516 - Topics in Creative Writing. 3 Credits.**

(R-9) Offered intermittently. Creative Writing faculty explore readings in their genres of specialty. Each professor chooses the focus, reading list, and assignments for the course. Level: Graduate

### **CRWR 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **CRWR 596 - Graduate Independent Study. 1-9 Credits.**

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(R-9) Offered every term. Prereq., consent of instr. and Associate Chair. Special projects in creative writing. Only one 596 permitted per semester. Level: Graduate

### **CRWR 598 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services Office. Level: Graduate

### **CRWR 599 - Thesis. 1-12 Credits.**

(R-12) Offered every term. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Creativity, Innovation, and Entrepreneurship (CIE)

### **CIE 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CIE 401 - Creative Collaboration. 3 Credits.**

(R-6) Offered intermittently. Creative Collaboration challenges students to become a team and engage real problems, preparing to be adaptive and successful collaborators regardless of their field. Each student works with a team of peers on projects that are student-generated, from campus research, city or business partners, or community non-profits. Level: Undergraduate-Graduate

### **CIE 402 - Digital Portfolio. 3 Credits.**

(R-6) Offered intermittently. A Digital Portfolio is a collection of text-based, graphic, or multimedia artifacts that represent a student's accomplishments. Digital Portfolios are a practical means of collecting, selecting and reflecting on a student's academic achievements. As a summative capstone experience, students develop a comprehensive Digital Portfolio that exemplifies the Innovation Certificate and condenses the skills gained, partnerships built, and inherent navigation of a contemporary workforce. Level: Undergraduate-Graduate

## Criminal Justice (CJUS)

### **CJUS 125N - Fundamentals of Forensic Science. 3 Credits.**

Offered autumn and online spring. A survey of the forensic sciences and related disciplines and their use in criminal investigations, the role of forensic scientists in the investigative process and as expert witnesses.

Gen Ed Attributes: Natural Science Course (N)

### **CJUS 488 - Forensic Science the Crime Lab and Beyond. 3 Credits.**

Offered spring and online in autumn. Examination of the forensic sciences with emphases on the non-crime lab forensic sciences, new technologies, and new directions in the forensic sciences.



## Culinary Arts (CULA)

### **CULA 100 - Culinary Arts Fundamentals. 2 Credits.**

Offered during Autumn Semester. Offered at Missoula College. This class will provide the fundamentals to the food service industry, the program, and kitchen expectations. The student will learn the basics of mise en place, safety and sanitation, recipe organization, culinary math, and product requisitioning. In addition, students will learn the importance of uniforms, knives, and other personal hygiene requirements prior to entering the kitchen.

### **CULA 101 - Introduction to Knife Skills and Butchery. 2 Credits.**

Offered autumn and summer. Offered at Missoula College. Integrated Lab. Prereq. or Coreq., CULA 100 and CULA 105. Course fee: \$250. This course will introduce the student to the fundamentals of food handling practices, which include basic and advanced knife skills and butchery for vegetables, meats, poultry, and seafood. Students will be provided hands-on practice with knife safety, upkeep, and station set-up, as well as equipment safety and sanitation procedures used in professional and commercial kitchens.

### **CULA 105 - Food Service Sanitation. 2 Credits.**

Offered autumn and summer. Offered at Missoula College. Introduction to fundamentals in safe and sanitary food handling practices. Emphasis on development of a well-designed food safety program centered on Hazard Analysis Critical Control Point (HACCP).

### **CULA 156 - Dining Room Procedures. 3 Credits.**

Offered autumn and spring semesters. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory Class. Course fee: \$250. Introduction to the basic foundations of dining room service and protocol. Students will be encouraged to provide a "hospitality centered" service that culminates in an experience that exceeds the guests' expectations. Students will learn techniques for gaining a competitive advantage in the marketplace. Personal hygiene, mathematics, and basic culinary terminology related to dining room and beverage service are included.

### **CULA 157 - Pantry & Garde Manger. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory Class. Course fee: \$250.00. Identification of a variety of fresh greens, vegetables and fruits, their general and specific use, standards of quality, preparation and presentation. Also covered are entrée salads, side salads, salad dressings, cold sauces, relishes, dips, appetizers, canapés/amuse bouche, frozen desserts, and hot appetizers.

### **CULA 158 - Breakfast and Sandwich Cookery. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory Class. Course Fee \$250. To introduce a hands-on approach to various hot and cold sandwiches as well as classic American Cuisine. Breakfast preparations and egg cookery are explored. Students set up and maintain a fast-paced station and utilize appropriate equipment, proper cooking temperatures, and sanitation practices. The product is evaluated and judged according to standards of quality and consistency which include: flavor, appearance, aroma, body.

### **CULA 160 - Soups, Stocks, & Sauces. 3 Credits.**

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Offered every term. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory Class. Course fee: \$250.00. To introduce a hands-on approach to stocks, soups and sauces. This class will explore the foundations of cooking in the form of stocks and broths, the mother sauces, international sauces and soups, classical French soup techniques, as well as the basic applications of thickening agents and mirepoix.

### **CULA 161 - Meats & Vegetables. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory class. Course fee: \$250.00. To introduce a hands-on approach to various meats and game animals; poultry and game birds; fish and shellfish; vegetable and starch cookery. Apply good technique, observing all standards for ingredient preparation, appropriate equipment, cooking temperatures, and flavor development. Evaluate the product and judge it according to standards of quality; flavor, appearance, aroma, body.

### **CULA 162 - Storeroom Management and Receiving Operations. 2 Credits.**

Offered autumn and spring semesters. Offered at Missoula College. Prereq., CULA 101 and CULA 105. This course will give a hands-on approach to managing a storeroom and inventory in a food service establishment. Students will practice inventory control, purchasing, receiving goods, proper storage, sanitation, food waste elimination, and yield tests. Laboratory class. Course Fee: \$103.00

### **CULA 165 - Baking & Pastry. 5 Credits.**

Offered every term. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Integrated lab class. Course fee: \$250.00. This course provides students with practical experience working in a bakeshop situation realistic to restaurant kitchens and bakeries. Students become familiar with producing a variety of baked goods as well as setting up mise en place, different baking techniques, and dessert plating techniques for the dining room and banquet situations. Baking and Pastry focuses on weights, measures, formulas and general baking classifications, handling and storage of ingredients, safety and sanitation, production of yeast raised dough products, cakes, cookies, batters, breads, biscuits, muffins, pies, and special dessert preparation.

### **CULA 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **CULA 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **CULA 198 - Internship. 1-6 Credits.**

Introduction to foundations of dining room service and protocol. Includes techniques in dining room service. Personal hygiene, applied math, basic culinary terminology, beverage management, and table side cooking methods are practiced.

### **CULA 204 - Bakery and Espresso Retail Management. 2 Credits.**

Offered spring. Prereq., CULA 101 and CULA 105. Integrated lab class. Offered at Missoula College. Course fee required. This course will explain the fundamentals of operating a retail bakeshop and espresso bar. Students will have on-the-job training in customer service, cash handling, espresso and drink service, bakery merchandising, display case design, sales and marketing for small businesses, and practical Point-of-Sales experience.

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### **CULA 205 - Catering Management. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Coreq., CULA 298 and 299. Integrated lab class. Course fee: \$103.00. This course will introduce the student to a comprehensive look at planning, starting, and operating a successful catering business. The course will explain the fundamentals of menu development, execution, and financial planning for a variety of catering operations including: restaurants, hotels, large institutions, private companies, event planning, and on vs. off-site events.

### **CULA 206 - Restaurant Management. 3 Credits.**

Offered spring. Offered at Missoula College. Although no prerequisites are required, CULA 220, ACTG 101, ACTG 102, or ACTG 201 is recommended. This course will explain the fundamentals of opening and managing a restaurant. Students will study and create business plans that include restaurant concepts, menus, financial statements, marketing and advertising campaigns, equipment lists, and standard operating procedures for both sanitation practices (including HACCP plans) and general employment practices. This course will also a study and discuss industry trends and current ethical and professional management practices for restaurateurs.

### **CULA 210 - Nutritional Cooking. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CULA 101 and CULA 105. This course provides the basics of human nutrition as it relates to culinary professionals. Students will experience the course material in both lecture and in a hands-on approach to the principles of healthful cooking techniques and special dietary needs. Students will learn how to develop and modify recipes to produce healthful menu options with whole foods. This course also introduces conventional and sustainable farming practices and how it relates to nutritional cooking. Integrated lab class. Course fee: \$250.

### **CULA 220 - Purchasing and Cost Control. 3 Credits.**

Offered autumn semester. Prereq., CULA 101 and CULA 105. Completion of math requirement for degree required. Offered at Missoula College. This course provides the principles of purchasing foods and materials based on needs, specifications, availability, and seasonality. Students will be presented the costs of doing business including products, labor, facilities, and preparing financial statements.

### **CULA 255 - Montana Meats and Charcuterie. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., CULA 101 and CULA 105. Laboratory class. Course fee required. This course will provide hands-on practice with the different areas of charcuterie. Students will learn the techniques of sausage making, salting and curing, fermentation, food preservation, refined paté execution, and buffet presentation, including centerpieces.

### **CULA 270 - Purchasing and Cost Controls. 5 Credits.**

Offered autumn. Prereq., CULA 101, CULA 105, and M 105 or consent of instructor. Principles of purchasing foods and materials based on needs, specifications, availability, and seasonality. Costs of doing business including products, labor, facilities, and preparing financial statements.

### **CULA 275 - Patisserie. 2 Credits.**

Offered spring. Offered at Missoula College. Advanced principles and techniques in preparing custard sauces, pastry cream, puddings, custards, mousses, Bavarians, souffles, ices, crepes, fruits, and dessert sauces. Emphasis on presentation of plated desserts.

**CULA 280 - Senior Practicum. 3 Credits.**

Offered spring. Missoula College course. Integrated lab class. Prereq., CULA 152 and CULA 206. This course will be a culmination of education for the AAS in Food Service Management. Students will work on thesis projects that applies all areas of education to highlight their interests and abilities in food service management and the culinary arts. Course will conclude with the final practical exam required for graduation.

**CULA 291 - Special Topics. 1-6 Credits.**

Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

**CULA 298 - Food Service Internship. 1-6 Credits.**

Offered all terms. Offered at Missoula College. Variable Credits. Work-based education in a position appropriate to student's interest for career opportunities and growth while upholding the educational standards of the Big Sky Culinary Institute. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Offered for CR/NCR grading only.

**CULA 299 - Culinary Arts Capstone. 2 Credits.**

Offered spring. Offered at Missoula College. Coreq., CULA 205 and CULA 298. Students must be enrolled in final semester of program and maintain a minimum "C" in all courses required for graduation in the AAS Degree. This course will be a culmination of education for the AAS in Food Service Management. Students will work on thesis projects that applies all areas of education to highlight their interests and abilities in food service management and the culinary arts. Course will conclude with the final practical exam required for graduation

## Curriculum and Instruction (C&I)

### **C&I 160 - Learning Strategy in Higher Education. 1-2 Credits.**

Offered autumn and spring. Prereq., C&I 194. Instruction and application of college study skills including lecture note taking, time management, reading textbooks, test taking, and critical thinking. Elective credit only.

### **C&I 194 - Freshman Seminar I. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr, coreq., C&I 160. A review and discussion of current research. Topics vary.

### **C&I 195 - Special Topics. 1-5 Credits.**

(R-15) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **C&I 287 - Business Communications. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent. Emphasis on consistent and logical approaches to solving communication problems and creating successful communication products.

Gen Ed Attributes: Writing Course-Intermediate

### **C&I 295 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offerings of visiting professors, new courses, or current topics.

### **C&I 296 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of advisor and instr.

### **C&I 298 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of advisor, instructor, and director of field experiences. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **C&I 341 - Information Management & Design. 3 Credits.**

Offered spring. Prereq., CSCI 172. Emphasis on the development and maintenance of a file management system, application of effective design concepts in the creation of professional print and digital images and documents, and the creation of digital videos for use in education and/or business.

### **C&I 394 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. Group analysis of problems in specific areas of education.

### **C&I 395 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **C&I 498 - Internship. 1-6 Credits.**

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Offered intermittently. Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **C&I 536 Assessment and Learning in International Baccalaureate Programs. 3 Credits.**

Prereq., EDU 534 and EDU 535. This course examines the critical role of assessment in IB programs. It addresses both formative and summative assessments as an integral part of the IB curriculum. Participants will learn how to design assessments and create effective feedback strategies based on the learning needs of students. This course requires fieldwork experience in IB schools. Level: Graduate

### **C&I 555 Workshop. 1-6 credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree. Level: Graduate

## Dance (DANC)

### **DANC 000 - Spirit Squad Class Roster. 0 Credits.**

### **DANC 100A - Introduction to Modern Dance. 3 Credits.**

(R-6) Offered autumn and spring. Introduction to basic modern dance vocabulary through exercises for alignment, strength and flexibility and combinations across the floor.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 108A - Dance Forms. 1-8 Credits.**

(R-8) Offered autumn and spring. Introduction to basic dance vocabulary and technique in a particular style.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 110A - Introduction to Ballet. 3 Credits.**

(R-6) Offered autumn and spring. Introduction to basic ballet positions and steps.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 115A - Introduction to Jazz Dance. 3 Credits.**

(R-6) Offered autumn and spring. Introduction to basic strengthening and stretching exercises and stylistic characteristics of jazz.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 129A - Dance Performance Lab I. 1 Credit.**

(R-7) Offered autumn and spring. Credit for rehearsing and performing in approved Theatre & Dance productions.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 130A - Introduction to Dance. 3 Credits.**

Offered autumn and spring. The various elements of dance and basic artistic principles underlying dance and all of the arts. Introduces the student to beginning-level dance vocabulary and dance skills as well as the creative process through direct experience.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 160A - Dance Forms: Irish. 2 Credits.**

(R-8) Offered autumn and spring. Introduction to basic Irish dance vocabulary and technique.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 165A - Dance Forms: African. 3 Credits.**

(R-6) Offered autumn. Introduction to basic African dance vocabulary and technique.

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Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 170A - Dance Forms: Tribal Belly. 2 Credits.**

(R-8) Offered intermittently. Introduction to basic tribal-style belly dance vocabulary and technique.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 191 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **DANC 194 - Seminar: First Year. 1 Credit.**

Offered autumn and spring. Introduces incoming freshmen to the world of university dance and contemporary dance as a profession.

### **DANC 195 - Studio/Practicum. 1-6 Credits.**

(R-12) Offered intermittently. Studio-based course, emphasizing one-on-one faculty instruction. Students meet during regularly scheduled times with faculty or in small groups throughout the semester to discuss the development of their individual work. Mountain Campus. Face to face.

### **DANC 200A - Contemporary Modern II. 2 Credits.**

(R-12) Offered autumn and spring. Continuation of the modern dance vocabulary at an advanced-beginner level.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 205 - Improvisation. 2 Credits.**

(R-6) Offered spring. Exploration of stimulus, structure and performance of improvised movement. Elements such as space, shape, motion, time, quality, form and awareness emphasized. Instructor-designed structures, transitioning to student-designed scores, culminating in improvised performance.

### **DANC 210A - Ballet II. 2 Credits.**

(R-12) Offered autumn and spring. Continuation of the ballet vocabulary at an advanced-beginner level.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 215A - Jazz Dance II. 2 Credits.**

(R-12) Offered autumn. Continuation of the jazz vocabulary at an advanced-beginner level.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 217 - Musical Theatre Styles. 2 Credits.**

(R-4) Offered spring. Prereq., DANC 100A and DANC 110A and DANC 115A. A foundational course in techniques and styles of dance and choreography for musical theatre.

### **DANC 220 - Creative Practice I. 2 Credits.**



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(R-4) Offered autumn. Exploration of stimulus, structure, and performance of both composed and improvised movement. Elements such as space, shape, energy, motion, time, quality, form and awareness emphasized. Instructor-designed structures, transitioning to student-designed scores, culminating in originally created/improvised performance.

### **DANC 225 - Rehearsal & Performance. 1-4 Credits.**

(R-24) Offered autumn and spring. Open to students who are choreographing a dance for a concert or to those who have been selected through audition to perform.

### **DANC 227 - Community Dance Initiatives. 1 Credit.**

(R-8) Offered autumn and spring. This course formalizes program activities students practice each semester, ranging from national and regional to local dance initiatives. Introduces methods, philosophies, and approaches to assist in students success in utilizing dance as a tool to conduct community engagement.

### **DANC 229A - Dance Performance Lab II. 1 Credit.**

(R-7) Offered autumn and spring. Credit for rehearsing and performing in approved Theatre & Dance productions.

Gen Ed Attributes: Expressive Arts Course (A)

### **DANC 234L - Dance in Popular Movies. 3 Credits.**

Offered spring. Survey of the history of dance and movement on film, with specific focus on the use of and reasons for choreography in popular movies of specific decades.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **DANC 280 - Dance Conditioning: Pilates. 1 Credit.**

(R-8) Offered intermittently . Pilates mat (floor) exercises to build core control, strength and flexibility.

### **DANC 291 - Special Topics. 1-3 Credits.**

(R-12) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **DANC 294 - Seminar/Workshop. 1 Credit.**

Offered autumn and spring. One-time offerings of current topics.

### **DANC 295 - Student Teaching: Childrens Dance. 1 Credit.**

Offered autumn and spring. Students participate and gain beginning-level teaching experience in two of four dance classes for children ranging in ages from 3.5 to 12 years old.

### **DANC 298 - Cooperative Education/Internship. 1 Credit.**

Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (398, 498) may count toward graduation.

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### **DANC 300 - Contemporary Modern III. 3 Credits.**

(R-8) Offered autumn and spring. Extension of the modern dance vocabulary through lengthier combinations of movement.

### **DANC 305 - Contact Improvisation. 2 Credits.**

(R-6) Offered autumn odd-numbered years. The art of moving with one or more partners while using a shifting point of contact and supporting each other's weight. Skills such as rolling, suspending, falling and recovering together explored through physical sensations that use weight, counter-balance and yielding.

### **DANC 310 - Ballet III. 2 Credits.**

(R-8) Offered autumn and spring. Development of ability to combine steps; carriage of head and arms.

### **DANC 315 - Jazz III. 2 Credits.**

(R-6) Offered spring. Continuation of DANC 215A.

### **DANC 320 - Creative Practice II. 2 Credits.**

(R-6) Offered spring odd-numbered years. Explores ways to manipulate several dancers in space, through repetition of shapes, through related rhythms. May include choreography for videotape.

### **DANC 322 - Dance Touring. 1-4 Credits.**

(R-24) Offered autumn and spring. Prereq., audition. Rehearsal and touring to the community.

### **DANC 325 - Spirit Squad. 1 Credit.**

(R-10) Offered autumn and spring. UM cheer and dance team selected during audition process each spring; students perform routines at the intermediate jazz level. Development of current dance performance, leadership, communication and organizational skills.

### **DANC 327 - Advanced Rehearsal and Performance. 1-4 Credits.**

(R-24) Offered autumn and spring. Prereq., DANC 225 and class level of JR/SR. Open to junior/senior dance majors and minors who are choreographing a dance for a university dance concert or who have been selected through audition to perform. Enrolled students engage in creative practices to enhance overall artistry, personal voice and nuance in choreography and performance.

### **DANC 329 - Dance Stage Management Practicum. 1 Credit.**

(R-6) Offered autumn and spring. Stage management practicum involving stage managing or assistant stage managing a dance production. Involves evening and weekend work.

### **DANC 334 - Dance History. 2 Credits.**

Offered autumn odd-numbered years. Discussion of primary movements and major figures in American modern dance, including global influences and its relationship to cultural trends of the twentieth and twenty-first centuries.

### **DANC 345 - New Visions Dance. 1 Credit.**

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(R-4) Offered autumn and spring. Students interact with adults with developmental disabilities in an adaptive dance class where movement is used as a therapeutic modality for people with cognitive and physical impairments. Students interact with the participants, engage as role models and gain beginning teaching experience.

### **DANC 360L - World Dance. 3 Credits.**

(R-6) Offered spring even-numbered years. Investigation of dances of diverse cultures. Study of dance as: an emblem of cultural identity, social order, power and gender-specific behavior; an expression of religion and/or ritual; a classical art form; and as a medium for personal expression in Western and non-Western world cultures.

Gen Ed Attributes: Lit & Artistic Studies (L), Cultural Intl Diversity (X)

### **DANC 380 - Science of Dance Movement. 3 Credits.**

Offered intermittently. Study of the skeletal system and how it relates to dance movement. Basic kinesthetic principles, conditioning for dancers, and injury recognition and prevention.

### **DANC 391 - Special Topics. 1-24 Credits.**

(R-24) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **DANC 392 - Independent Study. 1-3 Credits.**

(R-24) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **DANC 394 - Seminar/Workshop. 1 Credit.**

(R-2) Offered autumn and spring. One-time offerings of current topics.

### **DANC 395 - Studio/Practicum. 1-6 Credits.**

(R-12) Offered intermittently. Studio-based course, emphasizing one-on-one faculty instruction. Students meet during regularly scheduled times with faculty or in small groups throughout the semester to discuss the development of their individual work.

### **DANC 399 - Junior Creative Research Project. 1 Credit.**

(R-6) Offered autumn and spring. Independent study in choreography or a research paper which could be on such subjects as teaching styles, multiple intelligence theory, dance historical topics, dance injuries, etc. An initial proposal, a journal, and a paper are required.

### **DANC 400 - Contemporary Modern IV. 3 Credits.**

(R-6) Offered autumn and spring. Performance of exercises and combinations that are technically demanding in strength, balance, weight, agility and line.

### **DANC 404 - Advanced Contemporary Modern. 3 Credits.**

(R-6) Offered autumn and spring. Continuation of DANC 400.

### **DANC 405 - Advanced Improvisation. 2 Credits.**

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(R-6) Offered intermittently. Exploration of improvisation and contact improvisation as performance art forms. Instructor and students collaboratively design, rehearse, and publicly perform improvisational scores.

### **DANC 406 - Dance as a Healing Art. 2 Credits.**

(R-6) Offered spring. Study of body movement as a reflection of inner emotional states. How changes in movement lead to changes in the psyche, promoting health and growth. Exploration of techniques for experiencing the inter-connection between movement and emotional expression.

### **DANC 410 - Ballet IV. 2 Credits.**

(R-8) Offered autumn and spring. Continues to build on skills developed in Ballet III; emphasis on developing advanced petite allegro, grand allegro, turns, and artistry.

### **DANC 440 - Dance Pedagogy. 2 Credits.**

(R-6) Offered autumn even-numbered years. Methods and experiences in teaching modern dance, ballet and jazz.

### **DANC 446 - Teaching Projects. 1-6 Credits.**

(R-24) Offered autumn and spring. Independent study that may involve either assisting in the teaching of a dance technique class or actually planning and teaching it.

### **DANC 491 - Special Topics. 1-24 Credits.**

(R-24) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **DANC 492 - Independent Study. 1-6 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **DANC 494 - Junior/Senior Seminar. 3 Credits.**

(R-6) Offered spring odd-numbered years. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Seminar to discuss both practical and philosophical issues confronting dance students about to enter the "real" world.

Gen Ed Attributes: Writing Course-Advanced

### **DANC 495 - Practicum/Field Work. 1-6 Credits.**

(R-6) Offered autumn and spring. Studio-based course, emphasizing one-on-one faculty instruction. Students meet during regularly scheduled times with faculty or in small groups throughout the semester to discuss the development of their individual work.

### **DANC 497 - Methods: Teaching Movement in Schools. 2 Credits.**

Offered spring. Experience in planning, observing and directing creative movement as a teaching tool in K-5.

### **DANC 498 - Internship. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., dance major.

## University Of Montana

### **DANC 499 - Senior Thesis/Creative Project. 1 Credit.**

(R-2) Offered autumn and spring. Prereq., DANC 399. Independent study in choreography or teaching. The student is responsible for setting up the project. An initial proposal, a journal, and a paper are required.

### **DANC 591 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **DANC 595 - Studio/Practicum. 1-6 Credits.**

(R-12) Offered intermittently. Studio-based course, emphasizing one-on-one faculty instruction. Students meet during regularly scheduled times with faculty or in small groups throughout the semester to discuss the development of their individual work. Mountain Campus. Face to face.

## Diesel Service Tech (DST)

### **DST 120 - Electrical Systems. 8 Credits.**

Offered spring. Offered at Missoula College. The theory of AC/DC electricity including Ohm's Law, magnetism, wiring diagrams, and circuit analysis. Starting, charging, and related systems are covered in-depth using test equipment commonly found in heavy equipment repair facilities. Electronic systems are reviewed and tested using common electronic test equipment.

### **DST 128 - Engine Service I. 4 Credits.**

Offered autumn. Offered at Missoula College. Introduction to the construction and operation of internal combustion engines with the diesel engine being examined in detail. The use of measuring tools and related special tools is covered extensively along with common manufacture rebuild procedures. Start-up and running practices are demonstrated on various running diesel engines. Students must complete this course with a letter grade of C or better to enroll in DST 135 Power Trains the second-half of the semester.

### **DST 135 - Power Trains. 7 Credits.**

Offered autumn. Offered at Missoula College. Chassis and drive train components used in light and heavy-duty trucks and other equipment. Clutches, manual transmissions, differentials, and final drives are covered.

### **DST 191 - Special Topics. 1-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **DST 192 - Independent Study. 1-6 Credits.**

(R-6) Offered at Missoula College. Offered every term. Course material appropriate to the needs and objectives of the individual student.

### **DST 221 - Brakes, Suspension, and Undercarriage. 6 Credits.**

Offered autumn. Offered at Missoula College. Air brake design, construction, and operating principles including an in-depth study of diagnostic procedures for troubleshooting and repairing brake systems. Suspension systems and undercarriage design and repair are covered along with common axle alignment procedures found in industry. Students must complete this course with a letter grade of C or better to enroll in DST 225, Hydraulics in the second-half of the semester.

### **DST 225 - Hydraulics. 6 Credits.**

Offered autumn. Offered at Missoula College. Theory and application of hydraulics relative to mobile construction equipment and industrial hydraulic systems. Includes valves, pumps, motors, actuators, and related hydraulic components, system maintenance, troubleshooting, and repair.

### **DST 229 - Engine Service II. 7 Credits.**

Offered spring. Offered at Missoula College. Prereq., DST 128. A continuation of Engine Service I with a major emphasis placed on the rebuilding of a diesel engine. Engine components repair and failure analysis are reviewed along with tune-up and running of diesel engines commonly found in the heavy equipment trade.

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Shop flat-rate procedures, work order procedures, and warranty requirements are covered. Students must complete this course with a letter grade of C or better to enroll in DST 230, Air Conditioning in the second-half of the semester.

### **DST 230 - Air Conditioning. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., DST 120 and DST 225. Principles, theories, and the hazards of working with R-12 and R-34, including laws governing these refrigerants. An in-depth study of the components of an air conditioning system including hands-on practice. Discharging and charging principles are discussed, including leakage testing and other general diagnostic principles found in the field.

### **DST 231 - Fuel Systems. 5 Credits.**

Offered spring. Offered at Missoula College. A comprehensive study of diesel fuel injection systems to include: Cummins, Roosa Master, Caterpillar, Detroit Diesel, and Bosch. Disassembly and repair of these systems are covered in-depth along with calibration practices. Installation, timing, and on-engine adjustments are made on diesel engines. On-engine diagnosis of the fuel systems using special diesel engine diagnostic tools is reviewed.

### **DST 235 - Advanced Power Trains. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., DST 135. A continuation of DST 135 with an emphasis on heavy automatic transmission, torque converters, and powershift transmission. In-depth coverage of component review troubleshooting and repair.

# Drafting Design (DDSN) < University of Montana

## Drafting Design (DDSN)

### **DDSN 113A - Technical Drafting. 3 Credits.**

Offered autumn. An introduction to the techniques and standard practices of communicating technical graphics. The class studies and practices drawing skills and learns the drawing standards that support the needs of the design team in advancing ideas. It also provides the foundation for successful drawing communication in the CAD environment. Topics covered include; drawing media and tools, hand drawing skills, perspectives, views, sketching, standard scales, geometric construction, sections, dimensioning, and tolerances.

Gen Ed Attributes: Expressive Arts Course (A)

### **DDSN 114 - Introduction to CAD. 3 Credits.**

Offered autumn. Offered at Missoula College. M 090/M 111 or equivalent. An introduction to computer aided design and drafting software for production of drawings and plans for architecture and engineering systems. Fundamentals of two dimensional drafting and drawing management for professional design.

### **DDSN 116 - 3D CAD. 3 Credits.**

Offered autumn. Offered at Missoula College Prereq. or Co-req., DDSN 114. CAD II provides a project-based, in-depth study of the skills and concepts involved in Computer Aided Design and Drafting. Topics covered include object grouping and sharing; three dimensional modeling; animation; and interoperability with other software. This course is the second in a two-part series covering the core AutoCAD application.

### **DDSN 135 - Solidworks. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. This course introduces the fundamentals of Solidworks 3D parametric feature-based CAD software for the creation of parts, assemblies, drawings, rendering, and animation. The course approach is designed to bring the real power of SolidWorks as a powerful modeling and design system in addition to the individual tools and functionalities available in the software. Hands-on trainings are emphasized throughout the course to ensure that the students gain practical skills to efficiently use SolidWorks based on a sound understanding of the theoretical concepts of 3D modeling and design.

### **DDSN 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **DDSN 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Prereq., consent of instr. Independent research in geography or planning.

### **DDSN 244 - GIS Mapping. 3 Credits.**



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Offered Spring. Offered at Missoula College. Basics of geospatial technologies; remotely sensed imagery, GIS, and GPS and how each of the individual areas can be used together to analyze spatial datasets. Students will explore a wide range of spatial data and will learn to apply these data sets to real-world solutions.

### **DDSN 245 - Civil Drafting. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq. DDSN 114. Introduces students to computer aided design software for common survey and engineering design and drafting applications. Topics include collection of survey data; the coordinate geometry system; surfaces; subdivision and land planning; road design and corridor modeling; utilities; site grading and drainage; mapping; and 3D visualization.

## Early Childhood Education (EDEC)

### **EDEC 295 - ECE Preschool Experience. 3 Credits.**

Offered autumn and spring. Prereq, consent of instructor. Experience in UM's Learning and Belonging (LAB) Preschool. EDEC 295 does not substitute for required coursework in the early childhood education (ECE: P-3) major or minor. Offered CR/NCR only.

### **EDEC 395 - EC Clinical Experience. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., admission to the Teacher Education Program. Arranged field experience and seminar focusing on applying content from the co-requisite courses. This course number may be used for multiple clinical experiences. Check the class schedule or with your advisor regarding the appropriate section.

### **EDEC 408 - Early Childhood Principles and Practices. 3 Credits.**

Prereq., Admission to the Teacher Education Program in early childhood: P-3. This course is an overview of principles and practices in early childhood education (ages birth through eight). The main topics to be covered will include: the sociological, professional, and theoretical perspectives of early childhood education with a focus on developmentally appropriate practice (DAP); the skills and dispositions needed in planning and implementing early care and education programs for all children; and education models in early childhood. Students must plan for a minimum of 45 hours in an early childhood setting to meet requirements for the application of course content. Co-convened course with EDEC 508.

### **EDEC 410 - Families, Communities, Culture. 3 Credits.**

Prereq., Admission to the Teacher Education Program in early childhood: P-3. This on-line course explores the dynamics of working together with families of young children (birth - 8) in early childhood programs using a family-centered approach that places the child in the context of family and community. Students will explore developmental relationship building, communication, needs-based assessment and cultural diversity through readings, online discussion groups, an independent service-learning project and field-work.

### **EDEC 420 - Implementing Standards and Assessment in Play-Based Environments. 3 Credits.**

Prereq., Admission to the Teacher Education Program in early childhood: P-3. This course features an in-depth examination of how early learning standards in all content areas (math, science, literacy, technology, physical education, and the arts) can be met through the design and facilitated use of play-based environments. Students will explore the significance of assessment in designing curriculum and early childhood environments including the relationship between assessment and outcomes, examine and critique different assessment tools and strategies, develop and implement assessment plans, and practice skills in collaboration to form assessment partnerships.

### **EDEC 434 - Social/Emotional Development & Child Guidance. 3 Credits,**

Prereq., admission to the Teacher Education Program in early childhood education: P-3. This course examines social and emotional development in young children and child guidance models for P-3 classrooms. Students will examine the development, components, and influences of social competence in the early childhood

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years, universal design, positive guidance techniques, challenging behaviors, functional assessments, and positive support plans. Students will develop skills in using positive guidance and management techniques while enhancing children's self-esteem and developing children's pro-social skills.

### **EDEC 453 - Early Childhood STEM. 3 Credits.**

Prereq., Admission to the Teacher Education Program in early childhood: P-3. This class must be taken concurrently with Level 4 courses and is restricted to students who have completed coursework in Levels 1, 2, and 3. This course is designed to address the following questions. How do K-3 students construct science and engineering understandings? Which classroom conditions foster opportunities for students to learn and enjoy science and engineering? What teaching strategies engage students in doing and understanding science and engineering? What does it mean to be a culturally responsive science and engineering teacher?

### **EDEC 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

### **EDEC 495 - EC Fieldwork/Practicum: Integrated Curriculum. 3 Credits.**

Offered autumn. Prereq., admission to the Teacher Education Program in early childhood: P-3. This course provides students the opportunity to participate in planning and facilitating learning activities in a multi-age early childhood program while also participating in an seminar. Students will observe and facilitate learning in a model early childhood setting and participate in on-going written and verbal reflection to explore key teaching and learning issues. The course will focus on promoting student knowledge, skills, and dispositions in the areas of child observation and assessment, curriculum planning, child guidance, and integration of curriculum using a broad repertoire of teaching strategies.

### **EDEC 508 - Early Childhood Principles and Practices. 3 Credits.**

Offered autumn. This on-line course presents the foundation principles and practices of early childhood education (ages birth through eight). The main topics to be covered will include: the sociological, professional, and theoretical perspectives of early childhood education with a focus on developmentally appropriate practice (DAP); the skills and dispositions needed in planning and implementing early care and education programs for all children; and education models in early childhood. Students will assume a leadership role in this co-convened course (EDEC 408) to include class presentations of research papers. Level: Graduate

### **EDEC 515 - Educational Professionals Working With Families Experiencing Adversity. 3 Credits.**

Offered even summer. In this course, students will become familiar with the major theories and research regarding family crisis, resiliency, protective factors, and coping skills with an emphasis on the risk factors of poverty, addiction, violence, and disabilities. These will be examined through an educational lens and will include the impact of family adversity on child development and learning, the role of educational programs in supporting families facing adversity, and an in-depth examination of how the NAEYC Code of Ethics provides guidance in meeting the needs of children and families facing adversity. Students will select and implement an evidence-based family strengthening intervention and evaluate the effectiveness. Level: Graduate

### **EDEC 520 - Meeting Standards Through Play-Based Environments. 3 Credits.**

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Offered spring of even years. This course features an in-depth examination of how early learning standards in all content areas (math, science, literacy, technology, physical education, and the arts) can be met through the design and facilitated use of play-based environments. Also examined will be the role of the teacher as environmental designer and facilitator of learning. In addition to advanced outcomes and assessment, students enrolled in EDEC 520 will develop and present information at an early childhood conference. Level: Graduate

### **EDEC 530 - Social and Emotional Development in Young Children. 3 Credits.**

Offered spring odd years. This online course examines the development, components, and influences of social competence in the early childhood years (birth ? 8). Positive guidance techniques that enhance children's self-esteem and pro-social skills will be taught. Students will examine and critique developmental theories, current literature, researched-based teaching strategies and assessment tools. Activities will focus on providing students opportunity to discuss, debate, analyze, and practice key foundations and skills. Students must plan for a minimum of 45 hours in an early childhood setting as well as planning and presenting a training session for parents/families. Level: Graduate

### **EDEC 540 - Neuroscience and Its Impact on Child Development. 3 Credits.**

Offered autumn. This course is an overview of research and methods in developmental cognitive neuroscience, including examination of typical and atypical brain development in the early childhood years. The role of experience, the range of plasticity, and influences such as early intervention will be some of the topics explored specific to early childhood teachers and professionals. Also examined will be neuroscientific claims and whether research supports, contradicts, or does not provide enough evidence to determine the accuracy of the claim. Level: Graduate

### **EDEC 560 - Public Policy, Advocacy, and Leadership in ECE. 3 Credits.**

Offered spring. Participants in this course will critically examine key policy issues facing early childhood and determine ways to engage in and lead others in informed, effective advocacy. The theories, research, and approaches to early care and education advocacy, leadership, and change will be studied and applied through the implementation of an advocacy project. Level: Graduate

### **EDEC 591 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **EDEC 595 - Early Childhood Fieldwork/Practicum. 3 Credits.**

Offered spring. This course provides students the opportunity to participate in planning, facilitating, and evaluating learning activities in an early childhood setting. Through the fieldwork and on-line seminar, course activities will focus on promoting student inquiry and analysis in the areas of child observation and assessment, curriculum planning, child guidance, and integration of curriculum using a broad repertoire of teaching strategies. Students are required to be based in an approved, accredited early childhood program for a minimum of 8 hours/week where they will video and present a teaching presentation in class. Level: Graduate

## Earth Systems (ERTH) < University of Montana

### Earth Systems (ERTH)

**ERTH 303N - Weather and Climate. 3 Credits.**

Offered spring. Origin, composition, structure, and dynamics of the atmosphere, gas and radiation laws, energy budget and balance, weather elements, North American weather systems, and climate change. To succeed in this course students should have comfort with basic algebra.

Gen Ed Attributes: Natural Science Course (N)

## Economics (ECNS)

### **ECNS 101S - Economic Way of Thinking. 3 Credits.**

Offered autumn and spring. A critical examination of the market mechanism as a social decision-making device to guide the use of a nation's resources. The limitations of these processes in light of current economic problems such as the rise of the large corporation, monopoly, environmental degradation, economic discrimination and the increasing role of the government.

Gen Ed Attributes: Social Sciences Course (S)

### **ECNS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ECNS 201S - Principles of Microeconomics. 3 Credits.**

Offered every term. The nature of a market economy, economic decisions of the household and firm, competition and monopoly, value and price determination, distribution of income and applied microeconomic topics.

Gen Ed Attributes: Social Sciences Course (S)

### **ECNS 202S - Principles of Macroeconomics. 3 Credits.**

Offered every term. Prereq., ECNS 201S. The determination of the level of national economic activity, inflation, economic instability, the role of money and financial institutions, and selected topics in public economic policy.

Gen Ed Attributes: Social Sciences Course (S)

### **ECNS 217 - Issues in Economic Development. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. Study of the processes of economic growth and development in the less developed world.

### **ECNS 301 - Intermediate Microeconomics with Calculus. 3 Credits.**

Offered spring and autumn. Prereq., ECNS 201S and M 162 or equiv. Analysis of consumer behavior, production, factor pricing, externalities and public goods.

### **ECNS 302 - Intermediate Macroeconomics. 3 Credits.**

Offered autumn and spring. Prereq., ECNS 202S. Analysis of national income determination, unemployment, and inflation with emphasis on the role of fiscal and monetary policy.

### **ECNS 310 - Introduction to Health Economics. 3 Credits.**

Offered intermittently. Prereq., economics course. Survey of market forces that govern the production and consumption of medical care in the U.S. market; uncertainty, asymmetric information, and concentrations of market power resulting in inefficient outcomes. Topics include cost escalations, role of medical insurance, and problems of an aging population.

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### **ECNS 312 - Labor Economics. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. Economic analysis of labor markets. Theories of wage determination, discrimination and poverty with implications for manpower policy.

### **ECNS 313 - Money and Banking. 3 Credits.**

Offered intermittently. Prereq., ECNS 202S. Definition and role of money; banks and other financial institutions as suppliers of money; the federal reserve system as a regulator of money; monetary theories, history, and policy.

### **ECNS 320 - Public Finance. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. Rationale for governmental expenditure; public goods; public choice. Analysis of expenditure policy. Intergovernmental relations.

### **ECNS 325 - Economics of Sports. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. This course applies economic theories and tools to better understand the professional and amateur sports markets. Level: Undergraduate

### **ECNS 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ECNS 392 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., six credits in economics and consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **ECNS 398 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Extended classroom experience that provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. The department will determine the number of credits to be earned for the experience based upon the activities outlined in the learning agreement. Prior approval must be obtained from the faculty supervisor and the Internship Services office. The department has determined that credit for this course cannot count in the 36 credit minimum requirement for the major. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **ECNS 403 - Introduction to Econometrics. 4.000 Credits.**

Offered autumn. Prereq., an introductory statistics course. Quantitative methods in economics with emphasis on regression analysis.

### **ECNS 405 - Game Theory. 3 Credits.**

Offered every other autumn. Prereq., ECNS 201S. An introduction to the tools of game theory and how they are applied. In many real-world economic situations, outcomes are jointly determined where one agent's choices will affect another's welfare, and vice versa. Game theory provides a method of analyzing these economic situations where decisions are interrelated, and each agent recognizes this fact and thus makes decisions strategically.

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### **ECNS 406 - Industrial Organization. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. The theoretical basis for public policy solutions to market power. Emphasis on case studies in matters of antitrust, regulation of public utilities, and public ownership of business enterprises.

### **ECNS 431 - International Trade. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S or consent of instr. International trade: theory, policy, institutions, and issues. Analysis of comparative advantage and trade restrictions, negotiations, and agreements.

### **ECNS 433 - Economics of the Environment. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S. Outlines a theoretical framework for the analysis of environmental problems, including concepts of market failure and externalities, materials balance and property rights. The policy implications of this analytical model are explored for a range of topics including pollution and the preservation of natural environments and species. Formally cross-listed with EVST 440.

### **ECNS 445 - Introduction to Environmental Economics & Climate Change. 3 Credits.**

Offered autumn every other year. Same as CCS 445. Prereq., ECNS 201S. An introduction to the economics of various policy approaches towards climate change and other international environmental issues such as trans-boundary pollution problems, international trade and the environment and pollution haven hypothesis.

### **ECNS 450 - Advanced Topics in Economic Development. 3 Credits.**

Offered intermittently. Prereq., ECNS 201S and ECNS 202S, or consent of instructor. Advanced treatment of the processes of economic growth and development in the less developed world.

### **ECNS 451 - Behavioral and Experimental Economics. 3 Credits.**

Prereq., ECNS 201. An overview of experimental economics and behavioral economics. Outlines methods and instruments frequently used in economics experiments. Experimental design and assessment. Risk aversion, prospect theory, preference stability, and altruism.

### **ECNS 481 - Communicating Economics. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course. In this course, students will integrate and apply the knowledge they have gained through the Economics major and develop their skills in communicating that knowledge. Students will apply economic theory and evidence to practical problems faced by themselves, policymakers, businesses or other economic agents. Students will practice identifying the economic principles behind observed problems or interesting phenomena, applying economic models to analyze these topics, and communicating this knowledge in different ways to a range of audiences. Additionally, students will learn to read academic research papers and synthesize the findings in order to answer practical questions. Level: Undergraduate

Gen Ed Attributes: Writing Course-Advanced

### **ECNS 488 - Research Methods & Thesis Design. 2 Credits.**



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Offered autumn. Prereq., senior standing, economics major. Development of senior thesis proposal; presentation of research topics and methods by economics faculty and seminar participants.

Gen Ed Attributes: Writing Course-Advanced

### **ECNS 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ECNS 492 - Independent Study. 1-15 Credits.**

(R-15) Offered intermittently. Prereq., 12 credits in economics and consent of instr.

### **ECNS 494 - Senior Seminar. 2 Credits.**

Offered spring. Prereq., senior standing, economics major. Capstone course for economics majors. Advanced topics in economic methodology, theory and/or public affairs.

### **ECNS 499 - Senior Thesis/Capstone. 2 Credits.**

Offered spring. Prereq., senior standing, economics major. Completion of senior thesis; presentation of results by seminar participants.

Gen Ed Attributes: Writing Course-Advanced

### **ECNS 501 - Graduate Research. 1-6 Credits.**

(R-6) Offered autumn and spring. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **ECNS 511 - Microeconomic Theory. 3 Credits.**

Offered autumn. Prereq., ECNS 301. Advanced theoretical treatment of consumer and producer behavior. Level: Graduate

### **ECNS 513 - Macroeconomics and Forecasting. 3 Credits.**

Offered spring. Prereq., STAT 216 or equivalent. An overview of modern macroeconomics with an emphasis placed on modeling and forecasting. Level: Graduate

### **ECNS 560 - Advanced Econometrics. 4.000 Credits.**

Offered spring. Prereq., ECNS 403. Advanced quantitative methods in econometrics. Coverage of probit-logit regression models, simultaneous equation system, and other specialized techniques. Level: Graduate

### **ECNS 569 - Empirical Research Design. 1-3 Credits.**

(R-6) Offered every term. Role and scope of empirical research. Planning and conduct of a research project. Level: Graduate

### **ECNS 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

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### **ECNS 596 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **ECNS 598 - Internship. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **ECNS 599 - Thesis. 1-12 Credits.**

(R-9) Offered every term. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Education K-12: Library Media (LIBM)

### **LIBM 461 - Information Literacy. 3 Credits.**

Offered spring. Instructional techniques for teaching literacy skills, information retrieval, research, and lifelong learning; exploration of how curriculum is designed and how library instruction is integrated into the classroom; collaborative planning, methods of library instruction, and its assessment; development of an integrated unit; and creation of a school research process model.

### **LIBM 462 - Youth Literature for Librarians. 3 Credits.**

Offered autumn even years and spring even years. Students will develop strategies for presenting fiction and non-fiction literature from the librarian's role as advocate of reading and collaborative co-teacher, encouraging children to cultivate a lifelong proclivity for reading for information and for pleasure; includes a focus on Indian Ed for All.

### **LIBM 464 - Reference Resources. 3 Credits.**

Offered intermittently. Evaluation, selection, and use of basic reference resources. Teaching of media skills, information negotiation, search strategies, database use, and information services.

### **LIBM 466 - Libraries & Technology. 3 Credits.**

Offered Summer. Uses of digital technologies in all aspects of library operations, including cataloging and circulation, collection development, reference services, and administration. Level: Undergraduate, Graduate.

### **LIBM 467 - Collection Development & Cataloging. 4 Credits.**

Offered autumn. Students will develop policies and procedures for creating, maintaining and cataloging print and non-print materials in the school library.

### **LIBM 468 - Administration & Assessment of Library Programs. 3 Credits.**

Administrating and managing the school library space, materials, budget, and programs. Assessing the library program in terms of effectiveness, instructional collaboration, and district support, using state, regional and national guidelines for library programs and services.

### **LIBM 491 - Special Topics. 1-6 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate, Graduate.

### **LIBM 492 - Independent Study. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **LIBM 495 - Practicum. 2 Credits.**

Offered spring and summer. Prerequisite: 16 credits in library and consent of instructor. Supervised field experience in selected phases of library operations, including assessment.

## Education K-12: Special Edu (EDSP)

### **EDSP 401 - Intro Early Intervention. 3 Credits.**

Offered autumn odd-numbered years. Restricted to Curriculum & Instruction and Certification majors. This course covers issues relevant to serving very young children and their families. Topics include: ecological systems theory, typical and atypical development, family and child advocacy, naturalist environments, policies and procedures, models of intervention, transdisciplinary service delivery, Individual family service plans, and transition to preschool services. This course requires a 45-hour practicum.

### **EDSP 403 - Curriculum and Methods in Early Special Education. 3 Credits.**

Offered autumn even-numbered years. Principles in selecting and adapting early childhood curriculum materials for young children with disabilities; development, implementation and evaluation of individualized education programs; and appropriate teaching strategies for the early childhood special education classroom. Includes a practicum.

### **EDSP 405 - Assessment of Students with Exceptionalities. 3 Credits.**

Focus on a variety of assessment procedures for students who qualify for Special Education services. A variety of assessments and assessment techniques will be taught, with a strong emphasis on the use of ecologically valid assessment tools. Specific measurement skills will be taught including observation skills. Field experience is required.

### **EDSP 426 - Introduction to Transition & Community. 3 Credits.**

Introduction to issues and strategies for preparing adolescents and young adults with disabilities for the transition from school to future careers, post-secondary education, and other post-school environments. These issues are discussed within the context of more global efforts to create school-to-career programs in school settings for all students. A field experience is required.

### **EDSP 454 - Advanced Academic Interventions. 3 Credits.**

Evidence-based assessment and instruction techniques in all basic academic areas. Particular focus on general outcome and curriculum-based measures and the alignment of these and other assessments to interventions. A field experience is required.

### **EDSP 456 - Introduction to Methods for Low Incidence Disabilities. 3 Credits.**

Offered spring and odd summers. Introduction to research-based methods of instruction for students with low incidence disabilities in basic communication, mobility, sensory, and social skills, as well as academic skills (especially literacy and general education curricular access). An introduction to augmentative and alternative communication (AAC) and assistive technology (AT) is also addressed. A field experience is required.

### **EDSP 461 - Positive Behavior Supports. 3 Credits.**

Offered spring and odd-numbered summers. In-depth study of the principles and procedures for managing problem behaviors with an emphasis on prevention and classroom management. A field experience is required.

### **EDSP 462 - Special Education Law, Policy, and Practice. 3 Credits.**

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Offered autumn and even-numbered summers. Historic and current perspectives on laws, policies and practices of the special education and related fields. Coverage of all aspects of the special education process including collaborative practices.

### **EDSP 495 - Student Teaching: Special Education. 1-10 Credits.**

Offered autumn and spring. Prereq., completion of all courses in the special education minor with a grade of B or higher and consent of advisor and Director of Field Experiences. Supervised field experience in special education.

### **EDSP 526 - Transition & Communication Support. 3 Credits.**

Focus on issues and strategies for preparing adolescents and young adults with disabilities for the transition from school to future careers. These issues are discussed within the context of more global efforts to create school-to-career programs in school settings for all students. Level: Graduate

### **EDSP 556 - Methods of Low Incidence Disabilities. 3 Credits.**

Offered spring and odd summers. Focus on research-based methods of instruction for students with low incidence disabilities in basic communication, mobility, sensory, and social skills, as well as academic skills (especially literacy and general education curricular access). An introduction to augmentative and alternative communication and life quality today and in the future. An introduction to augmentative and alternative communication (AAC) and assistive technology (AT) is also addressed. A field experience is required. Level: Graduate

## Education-K-12 (EDU)

### **EDU 162 - NCAA Student-Athlete Experience. 1 Credit.**

This course is designed to assist students in the development of necessary skills to be a successful college student-athlete. Topics will include a wide variety of areas including study skills, an introduction to campus resources, and personal and career development. Students will identify and discuss specific issues that pertain to them as student-athletes.

### **EDU 163 - Student-Athlete Success. 1 Credit.**

This seminar is designed to assist student-athletes in developing necessary life skills that will help them in their remaining years at the University of Montana. Topics will include a wide variety of areas such as: financial management, nutrition, career development and planning, healthy relationship skills, social responsibility, social etiquette, conflict resolution, and leadership.

### **EDU 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

### **EDU 202 - Early Field Experience. 1 Credit.**

Offered autumn and spring. Prereq., admission to Teacher Education Program in secondary and K-12. Guided introductory field experience for students committed to teaching as a profession. Connects field experience to content of co-requisite theory classes. Seminars include professional development portfolio, developmental level of students, diversity, learning/teaching strategies, motivation, classroom management, and assessment of learning.

### **EDU 212 - Successful Education Abroad. 1 Credit.**

This course fully prepares students for their education abroad experience. Their health and safety preparations include insurance, safety and education abroad videos, presentations on health care issues abroad and addressing emotional well-being while away from home. The logistical preparations include information and assistance with student visa application process, as well as registration at UM and abroad, credit transfer and billing. The cultural component of the class includes more specifically learning about cultural theories, intercultural communication, cultural adaptation, culture shock and re-entry culture shock as well as panel and small group discussions with former U of M study abroad participants and international students. Student are required to complete five weekly journal entries, interview paper, and final host country research paper. This course also prepares the student to be an ambassador for the University of Montana, while abroad.

### **EDU 221 - Educational Psychology & Measurement. 3.000 Credits.**

Offered autumn and spring. Prereq., admission to Teacher Education program in secondary and K-12. Analysis of fundamental psychological concepts underlying classroom teaching and management, learning and evaluation including educational measurement. Emphasis on cognition, developmental, and motivational aspects of learning.

### **EDU 222 - Educational Psychology & Child Development. 3.000 Credits.**

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Offered autumn and spring. Prereq., Admission to the Teacher Education Program in elementary or early childhood: P-3. This course must be taken concurrently with Level 1 courses. This course will examine the classroom practices that impact elementary aged childrens learning, motivation and development. The content is closely aligned with co-requisite courses and initial field experience, allowing opportunities for observation and practice of principles covered in class.

### **EDU 294 - Seminar/Workshop. 1-9 Credits.**

### **EDU 331 - Literature & Literacy for Children. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101; open to majors in elementary education, secondary education or pre-education. Genre survey, including cross-cultural literature, that focuses on responding to children?s literature through reading, writing, listening, speaking, and activities that emphasize selecting literature, teaching critical thinking, and integrating literature into the elementary curriculum.

### **EDU 338 - Academic Interventions. 3 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program in elementary or early childhood:P-3. This course must be taken concurrently with Level 1 courses. This course prepares pre-service teachers to work with all students including those who are struggling learners and high achievers. The course is focused on school-wide assessment and instruction methods with particular focus on working with individual children and small groups in core academic areas.

### **EDU 339 - Teaching Assessment in PK-8 Language Arts. 3 Credits.**

Offered autumn and spring. Prereq., admission to the Teacher Education Program in elementary education. This class must be taken concurrently with Level 2 courses. Language development and primary and secondary language acquisition, theory and application of teaching and assessing listening, speaking, writing, and viewing in a PK-8 setting.

Gen Ed Attributes: Writing Course-Advanced

### **EDU 340 - Classroom Management. 3 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program in elementary education. This course must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Level 1 and 2. This course is designed to prepare pre-service teachers to set up a classroom, establish classroom policies and procedures and routines, establish and maintain cooperative relationships with parents, effectively provide feedback to students, motivate desired student behavior, and research professional literature to seek best classroom management practices to hone the craft of effective instruction.

### **EDU 345 - Exceptionality & Classroom Management. 3 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program in secondary and K-12. Focus on classroom management and the characteristics and instructional adaptations for exceptional students in the regular classroom. Addresses the Individuals with Disabilities Education Act and subsequent reauthorizations, presents practices for working with students who are at-risk and students with disabilities in inclusive settings, and includes technological considerations.

### **EDU 346 - Exceptionalities. 3 Credits.**

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Offered autumn and spring. Prereq., Admission to the Teacher Education Program in elementary or early childhood: P-3. This course must be taken concurrently with Level 2 courses and is restricted to students who have completed coursework in Level 1. This course will focus on characteristics and strategies for optimizing learning for children with exceptionalities in the regular education classroom. Addresses the Individuals with Disabilities Education Act and subsequent reauthorizations, presents practices for working with students who are at-risk and students with disabilities in inclusive settings, and includes technological considerations.

### **EDU 360 - Promoting Wellbeing in P-12 Classrooms. 2.000 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program. This course is designed to increase students awareness of the critical role teachers play in enhancing children's emotional, social, mental and physical health. In addition, students will be encouraged to explore the influence of family, community, and school environment on the prevention of substance use and abuse and on the well-being of children and adolescents.

### **EDU 370 - Integrating Technology into Education. 3.000 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program and general computer literacy skills. Integration and use of computer and other technologies in education.

### **EDU 392 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **EDU 394 - Seminar/Workshop. 1-9 Credits.**

### **EDU 395 - Clinical Experience. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., admission to the Teacher Education Program. Arranged field experience and seminar focusing on applying content from the co-requisite courses. This course number is used for multiple clinical experiences. Check the class schedule or with your advisor regarding the appropriate section.

### **EDU 397 - Methods: Teaching & Assessing. 3 Credits.**

(R-15) Offered autumn and spring. Prereq., admission to the Teacher Education Program in elementary or early childhood: P-3 and WRIT 101 or equivalent, and one intermediate writing course. This course number is used for multiple methods courses. Check the class schedule or with your advisor regarding appropriate sections.

Gen Ed Attributes: Writing Course-Advanced

### **EDU 407E - Ethics & Policy Issues. 3.000 Credits.**

Offered every term. Prereq., admission to Teacher Education Program and EDU 202 or EDU 395. Practical application of ethical principles of the teaching profession. Analysis of the American public school and major policy issues from historical, legal, political, social as well as ethical perspectives.

Gen Ed Attributes: Ethical & Human Values Course

### **EDU 421 - Statistical Procedures in Education. 3 Credits.**



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Prereq., M 115 or equiv. or consent of instr. Concepts and procedures characterizing both descriptive and inferential statistics. Awareness of common statistical errors.

### **EDU 432 - Literature & Literacy for Young Adults. 3 Credits.**

Offered spring. Genre surveys; extensive reading, and analyzing of literature, authors and media addressed to students ages 12-18. Emphasizes effective teaching strategies for using high quality literature with middle school and secondary students. Not a substitute for EDU 331.

### **EDU 438 - Literacy Assessment, Diagnosis, & Instruction. 3 Credits.**

Offered spring. Prereq. prior coursework in reading methods and pedagogy. Based on the analytic process, emphasis on assessing, identifying, and devising instructional strategies to meet students' reading/writing strengths and needs.

### **EDU 441 - Leadership and Advocacy. 3 Credits.**

Offered autumn. Prereq., EDU 397 or EDU 481. Emphasis on teaching writing across the curriculum and supervising the school-wide writing program. Planning, implementing, and assessing writing, and connecting reading and writing will be addressed.

### **EDU 451 - Clinical Experience: L3 Pedagogy Contingent. 1 Credit.**

(R-2) Offered autumn and spring. Prereq., Admission to the Teacher Education Program in elementary. This class must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Levels 1 & 2. Arranged field experience in an elementary or middle school classroom completed with Elementary Professional Methods Block.

### **EDU 455 - Workshop. 1-6 Credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward an undergraduate degree. Level: Undergraduate

### **EDU 456 - Application of Literacy Models K12. 6 Credits.**

Offered summer. Prereq., EDU 438 or C&I 533. Provides classroom teaching experience under direct supervision. Candidates teach reading and writing and apply knowledge of assessing and correcting reading and writing difficulties in grades K-12.

### **EDU 461 - Introduction to Gifted/Talented Education. 3 Credits.**

This course provides a broad examination of the historical and philosophical perspectives of education for gifted and talented learners with emphasis on answering the question "What is giftedness?" Issues explored in the course include broad coverage of identification procedures, psychosocial correlates of gifted learners, the nature of intelligence and creativity, instructional options, laws/policies, and current research findings.

### **EDU 462 - Social and Emotional Development of Gifted and Talented Learners. 3 Credits.**

This course provides an overview of current theory and evidence-based practices in understanding the social and emotional development of gifted learners. Topics discussed in class range from research findings addressing social and emotional health and needs of the general population of gifted students to the unique

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needs of specific sub-groups of gifted students (e.g., gifted girls, gifted and learning disabled, highly creative students, traditionally underrepresented gifted students). Also discussed are guidance, counseling, self-concept and adjustment concerns of gifted students.

### **EDU 472 - Development of Digital Rich Workplace. 3 Credits.**

Offered spring. Prereq., CSCI 172. Project-based course to gain understanding and the ability to use web development tools to create a functional, well-designed web project. Additional topics/projects include: Web 2.0+ tapping the potential of digital tool; social media educational and business uses; gamification in education and business, and introductory electronic game development for the classroom and the boardroom.

### **EDU 481 - Content Area Literacy. 3 Credits.**

Offered autumn and spring. Prereq., Admission to the Teacher Education Program. Theories, models, instructional approaches for using literacy for learning in content fields. Emphasis on research, instructional practice, classroom assessment, multicultural and discipline integration.

### **EDU 491 - Special Topics/Experimental Courses. 1-6 Credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

### **EDU 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every semester. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **EDU 494 - Seminar: Applied Research & Reflective Practice. 1-9 Credits.**

(R-9) Required seminar during student teaching. Prereq., admission to the Teacher Education Program. Focuses on learning to conduct research on P-12 student performance to determine teaching effectiveness. Includes on-campus and/or on-line planning, conducting, and analyzing classroom practice.

### **EDU 495 - Student Teaching. 1-14 Credits.**

(R-14) Offered autumn and spring. Arranged capstone clinical experience required for all professional licensure students. Prereq., admission to the Teacher Education Program, completion of all required field experiences and methods courses, an application to student teach, and the consent of the Director of Field Experiences.

### **EDU 497 - Teaching and Assessing. 4 Credits.**

(R-15) Offered autumn and/or spring. Prerequisite: Admission to the Teacher Education Program. This course number is used for multiple elementary and secondary methods courses. Check the class schedule or with your advisor regarding appropriate sections.

5-8 Mathematics: 3 cr. Offered autumn and spring. This class must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Levels 1 & 2. Methods of teaching, assessing, and evaluating mathematics in the 5-8 middle grades including number and operations, rational numbers, ratio and proportion, measurement, algebra, expressions and equations, geometry, probability, statistics, and functions.

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K-8 Social Studies: 3 cr. Offered autumn and spring. This class must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Levels 1 & 2. Emphasis on developing teaching and assessing social studies teaching/learning opportunities that incorporate literature, primary sources and other developmentally appropriate activities. Overarching themes address diversity, integration across the curriculum and understanding state and national curriculum standards.

K-8 Science: 3 cr. Offered autumn and spring. This class must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Levels 1 & 2. Emphasis on developing, teaching, and assessing science teaching/learning opportunities that are inquiry-based, developmentally appropriate, integrated across the curriculum, and aligned with state and national curriculum standards.

4-8 Reading: 3 cr. Offered autumn and spring. This class must be taken concurrently with Level 3 courses and is restricted to students who have completed coursework in Levels 1 & 2. Preparation for teaching reading in a 4-8 setting so that all students are successful. Emphasis on reading to learn. Focus on using assessment to guide instruction, learning from trade books, textbooks, and electronic texts, activating prior knowledge, studying texts, and developing student enthusiasm for reading.

5-12 Science: 3 cr. Offered autumn. Methods of teaching science in the middle and secondary school. This course emphasizes the use of inquiry, problem-solving, appropriate use of technology, and assessment techniques that align with state and national curriculum standards.

5-12 Social Studies: 3 cr. Offered autumn. Foundations and purpose of the middle and secondary social studies curriculum. Elements of curricular design, including instructional methods, materials and assessment.

5-12 Mathematics: 4 cr. Offered autumn. Methods for teaching mathematics in grades 5-12 focusing on presentation of mathematics concepts and procedures through models, problem solving, and technology. Development of instructional strategies and classroom organizational models, discourse in the classroom, and multiple means for assessing student progress.

5-12 Business Subjects: 4 cr. Offered autumn. Methods for teaching business subjects in grades 5-12 focusing on content-specific topics in business, marketing, and information technology to include: instructional planning; effective teaching strategies (F2F & online); multiple means for assessing student progress; classroom management; and the relationship of the content area to standards-based curricula.

Computer Science 5-12 Offered autumn. Teaching and Assessing Computer Science is the capstone course for students pursuing careers as professional educators in K-12 school systems. This course presents best practices in pedagogy for teaching and assessing 5-12 students in computer science.

### **EDU 501 - Curriculum Design, Implementation, & Evaluation. 3 Credits.**

Underlying principles of design, factors affecting implementation, and evaluation and assessment of P-12 curricula at the student and program levels. Level: Graduate

### **EDU 502 - Philosophy of Education. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling, or Curriculum and Instruction. Same as EDLD 502. Major philosophical schools of thought and leading proponents of each. Concepts of society, the educative process, and the role of education. Level: Graduate

### **EDU 504 - History of American Education. 3 Credits.**

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Exploration of the ideas, individuals, and events that have influenced the curriculum, pedagogy, and operation of the American public school, from colonial America to the present time. Level: Graduate

### **EDU 510 - Developmental & Learning Sciences. 3 Credits.**

This is an advanced course that addresses application of psychological concepts in educational settings. This course will focus on theories of development, teaching and learning, and on applications of psychological research to learning, primarily to classroom settings. Level: Graduate

### **EDU 514 - Education Across Cultures. 3 Credits.**

Educational foundations of the study of diversity in American schools. Level: Graduate

### **EDU 515 - Computer/Technological Application in Education. 3 Credits.**

Prereq., a basic computer course or demonstrated computer literacy. Computer systems and other hardware utilizing various software applications by administrators, counselors, librarians, teachers, and students. Level: Graduate

### **EDU 518 - Inclusion and Collaboration. 3 Credits.**

Legal and ethical issues involved in the responsible inclusion of all individuals with disabilities through multi-disciplinary and collaborative efforts. Level: Graduate

### **EDU 519 - Authentic Assessment. 3 Credits.**

Focus on assessment practices in K-12 classrooms including a wide variety of assessments that meet curricular objectives as well as nationally required standardized exams to meet NCLB mandates. Level: Graduate

### **EDU 520 - Educational Research. 3 Credits.**

Offered every term. Same as EDLD 520 and HHP 520. Open to graduate level students in Education Leadership, Counseling, or Curriculum and Instruction majors. An understanding of basic quantitative and qualitative research methodology and terminology, particularly as they are used in studies presented in the professional literature. Level: Graduate

### **EDU 521 - Found Environmental Education. 3 Credits.**

Offered autumn. Same as ENST 521. Problem-solving approach to environmental education; problem identification, research and design and implementation of an educational approach to selected environmental issues. Level: Graduate

### **EDU 524 - Family and Diversity Issues. 3 Credits.**

An overview of different approaches, current issues, and problems involved in working with and supporting families including families from diverse backgrounds. Emphasis is placed on how a child with disabilities affects and is affected by parents, siblings, the extended family, and the community. Strategies for effective communication for the purpose of information sharing and collaborative planning with families are provided. Level: Graduate

### **EDU 525 - Teaching Environmental Science. 1-3 Credits.**

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(R-6) Offered spring even-numbered years. Prereq., consent of instr. Identification and examination of potential solutions to environmental problems and their impact on society. Major emphasis on teaching methods as they apply to environmental science. Level: Graduate

### **EDU 527 - Disciplinary Literacy Strategies. 3 Credits.**

Offered autumn. Prereq., teaching experience. Advanced theories, models, instructional approaches for using reading/writing for learning in content fields. Emphasis on research, instructional practice, classroom assessment. Level: Graduate

### **EDU 530 - Trends & Research in Reading and Writing. 3 Credits.**

Offered summer odd-numbered years. Survey of current research related to literacy practices in schools/communities. Theories, models, politics of literacy in K-12/Adult education. Level: Graduate

### **EDU 534 - Foundation and Principles of International Baccalaureate Programs. 3 Credits.**

This course is designed to provide students with an in-depth knowledge of the foundation and principles of International Baccalaureate Programs. Participants will examine the IB learner profile, the philosophical and pedagogical theories underpinning IB programs, the curriculum framework of the three IB Programs, Primary Years Program (PYP), Middle Years Program (MYP), and Diploma Program (DP), and the role of collaboration and reflection in IB schools. Level: Graduate

### **EDU 535 - Teaching and Learning in International Baccalaureate Programs. 3 Credits.**

Prereq., EDU 534 and EDU 202 (for secondary majors) or EDU 395 (for elementary majors). This course explores theory and practice of teaching and learning in IB programs. Participants will study the main learning theories underpinning IB curricular programs, examine examples of lesson plans for each IB program, learn strategies to differentiate instruction, participate in collaborative planning and instructional design, and engage in reflective practices. This course requires a fieldwork experience in IB schools.

### **EDU 536 - Assessment and Learning in International Baccalaureate Programs. 3 Credits.**

Prereq., EDU 534 and EDU 535. This course examines the critical role of assessment in IB programs. It addresses both formative and summative assessments as an integral part of the IB curriculum. Participants will learn how to design assessments and create effective feedback strategies based on the learning needs of students. This course requires fieldwork experience in IB schools. Level: Graduate

### **EDU 540 - Language Arts Pedagogy and Practice. 3 Credits.**

Offered summer even-numbered years. Prereq., teaching experience. Advanced theories and instructional approaches for teaching and assessing literacy. Level: Graduate

### **EDU 541 - Genre Studies. 3 Credits.**

Offered spring. The purpose of this course is to explore, in depth, several literary genres and to move from a survey approach to an intense focus on the variety of books and poems written for children and young adults. Particular attention will be given to research, authors, and awards in each of the following genres: science fiction, historical fiction, contemporary fiction, modern fantasy, non-fiction, graphic novels and poetry  
Level: Graduate

### **EDU 542 - Supervising/Teaching Math. 3 Credits.**

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Offered summer odd-numbered years. Curriculum trends, instructional materials, research and supervisory techniques relevant to a modern school mathematics program. Level: Graduate

### **EDU 548 - Supervising/Teaching Environmental Education. 3 Credits.**

Offered spring. Design, selection, and evaluation of materials for the teaching of environmental education. Level: Graduate

### **EDU 552 - Models of PD Math/Science. 3 Credits.**

Offered spring even years on-line. Exploration of various models of professional development and the development of implementation plans for workshops and in-service professional development in science and mathematics. Level: Graduate

### **EDU 555 - Workshop. 1-6 Credits.**

(R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree. Level: Graduate

### **EDU 557 - Graduate Literacy Practicum. 6 Credits.**

Offered intermittently in summer. Prereq., C&I 433 or 533. Based on readers' literacy strengths and needs, practitioners diagnose, devise, and implement instructional strategies for students in grades K-12. Level: Graduate

### **EDU 560 - Response to Intervention. 3 Credits.**

Review of evidence-based assessment and instruction techniques in all basic academic areas. Advanced application of general outcome and curriculum-based measures and alignment of these assessments to interventions. Preparation in service as a leader for the implementation of school-wide prevention models. A practicum is required. Level: Graduate

### **EDU 561 - Introduction to Gifted/Talented Education. 3 Credits.**

This course provides a broad examination of the historical and philosophical perspectives of education for gifted and talented learners with emphasis on answering the question "What is giftedness?" Issues explored in the course include broad coverage of identification procedures, psychosocial correlates of gifted learners, the nature of intelligence and creativity, instructional options, laws/policies, and current research findings. Level: Graduate

### **EDU 562 - Social and Emotional Development of Gifted and Talented Learners. 3 Credits.**

This course provides an overview of current theory and evidence-based practices in understanding the social and emotional development of gifted learners. Topics discussed in class range from research findings addressing social and emotional health and needs of the general population of gifted students to the unique needs of specific sub-groups of gifted students (e.g., gifted girls, gifted and learning disabled, highly creative students, traditionally underrepresented gifted students). Also discussed are guidance, counseling, self-concept and adjustment concerns of gifted students. Level: Graduate

### **EDU 563 - Methods and Curriculum for the Gifted and Talented. 3 Credits.**

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Prereq., EDU 561 and EDU 562. This is an advanced course in the education of gifted, talented, and creative students which focuses on (1) development of curriculum shown to be effective for gifted learners, and (2) implementation of teaching practices centered on discipline-based knowledge, learning styles, cultural variation, depth and complexity of content, and provisions for case-based, authentic and independent investigation. The purpose of this course is to apply the principles and knowledge obtained in EDU/C&I 561 and EDU/C&I 562 to the classroom experiences of gifted and talented learners. It is the third course in the Certificate in Gifted and Talented Education series. Level: Graduate

### **EDU 564 - Planning Programs for the Gifted and Talented. 3 Credits.**

Prereq., EDU 561 and EDU 562. This is an advanced course in the education of gifted, talented, and creative students which addresses program models supported by research, and focuses on the fundamental principles of program design and development for gifted learners. The role of program evaluation and the use of program evaluation models are also stressed. The purpose of this course is to apply the principles and knowledge obtained in EDU 561 and EDU 562 to the classroom experiences of gifted and talented learners. It is the fourth course in the Certificate in Gifted and Talented Education series. Level: Graduate

### **EDU 570 - Instructional Technology Found. 3 Credits.**

General introduction to the field, theory, and profession of instructional technology. Definition of instructional technology; history of the field. Level: Graduate

### **EDU 571 - Education, Technology, and Media. 3 Credits.**

Principles and practices of instructional design for integration of educational technology. Emphasis on role of technology in contemporary teaching/learning/assessing theory and practice, including learning styles and multiple intelligences. Level: Graduate

### **EDU 580 - Distance Learning: Theory & Implementation. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction. Introduction to distance learning models and exploration of satellite and computer-mediated course development, implementation, and evaluation. Level: Graduate

### **EDU 581 - Planning & Management for Technology in Education. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction. Creating, implementing, maintaining, and evaluating technology plans for educational institutions, including budgets, facilities, and hardware planning. Level: Graduate

### **EDU 582 - Education Technology Trends & Issues. 3 Credits.**

Exploration of trends and issues in the use of educational technology in a variety of settings. Level: Graduate

### **EDU 584 - Authentic Applications of Instructional Design. 3 Credits.**

Development of practical competencies in such components of instructional technology as development, production, materials evaluation, and project management and implementation. Level: Graduate

### **EDU 588 - Action Research in Classroom. 3 Credits.**

Readings in research in teaching/learning. Strategies to implement all components of an action research project in a classroom including planning/research design, action, reflection, and sharing. Level: Graduate

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### **EDU 589 - Professional Project. 3 Credits.**

Culminating course in online master's program. Students demonstrate connections across content areas through a mini-thesis, research-based product that is shared with other professionals through a publication and/or presentation at a conference or workshop. Level: Graduate

### **EDU 590 - Research. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **EDU 591 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **EDU 592 - Independent Study. 1-6 Credits.**

(R-18) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **EDU 594 - Seminar. 1-9 Credits.**

(R-9) Offered autumn and spring. Focuses on learning to conduct research on P-12 student performance to determine teaching effectiveness. Includes on-campus and/or on-line planning, conducting, and analyzing classroom practice. Level: Graduate

### **EDU 595 - Supervised Internship. 1-3 Credits.**

(R-9) Offered autumn and spring. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **EDU 598 - Internship. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Supervised field experience. Level: Graduate

### **EDU 599 - Professional Project/Thesis. 3 Credits.**

Capstone in master's program. Students demonstrate connections across content areas through a mini-thesis, research-based product that is shared with other professionals through a publication and/or presentation at a conference or workshop. Level: Graduate

### **EDU 607 - Seminar in Ethics. 3 Credits.**

The doctoral Seminar in Ethics presents a rigorous examination of the evolution of ethical theory through the lens of pedagogy and curricula. Beginning with religious and philosophical texts from the ancient world, the course moves through the major positions on ethics and moral development in the west. These include the Socratic Method, Virtue Theory, Lockean Pedagogy, the Categorical Imperative, Utilitarianism, Modern Discipline, Democratic Ethics, Moral Reasoning, Feminist Ethics, and Intersubjectivity. These topics will all be accessed through primary source texts. Level: Graduate

### **EDU 611 - Professional Seminar 1: Conducting Literature Reviews. 1 Credit.**



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Prereq., Admission to PhD program. This course will provide students with the knowledge and skills required to be knowledgeable consumers and effective creators of literature reviews in education and social sciences. Students will critically analyze the multiple components of the literature review in peer-reviewed journal articles relevant to their individual fields of interest, and write a publishable-quality literature review designed to address a question that is not answered in the research related to this field. Level: Graduate

### **EDU 612 - Professional Seminar 2. 2 Credits.**

Prereq., Admission to PhD program. This course will prepare students to understand model of field supervision and to carry out effective student teaching supervision. Additionally, students will learn key skills to become high-quality college-level instructors including course planning, pedagogical strategies and evaluation techniques. Level: Graduate

### **EDU 613 - Professional Seminar 3: Grant Writing. 1 Credit.**

Prereq., Admission to the PhD program. This course teaches students about the grant writing process. The course will span everything from searching for fundable opportunities that compliment the students' research interests to establishing a research team and community partners to writing an actual proposal. Level: Graduate

### **EDU 616 - Professional Seminar 4: Professional Presentations and Writing for Publication. 1 Credit.**

Prereq., Admission to the Ph.D. program. In this course, students will learn how to craft conference presentations and academic papers for publication through discussion and presentation. Students will read and discuss sources on data visualization, academic writing, and presentation through storytelling. Students will also transform academic research that they have done into a conference presentation and manuscript for publication in a scholarly journal. Level: Graduate

### **EDU 617 - Seminar in Policy and Policy Implementation. 2 Credits.**

Prereq., Admission to the PhD program. This course is part of a new, proposed Ph.D. program in Teaching and Learning that the Department of Curriculum and Instruction has submitted for the 2015-2016 review cycle. This course is part of the professional seminar series that all Ph.D. students in the program will take to help train them as future faculty. Level: Graduate

### **EDU 618 - Educational Statistics. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 618. Advanced statistical methods and use of the mainframe computer and microcomputer for data analysis. Use of a recognized statistical package for research applications. Level: Graduate

### **EDU 620 - Qualitative Research. 3 Credits.**

Offered autumn. Same as EDLD 620. In-depth review of descriptive, experimental, historiographic, ethnographic, and other qualitative research methods, designs, and approaches. Includes the development of a research proposal. Level: Graduate

### **EDU 621 - Advanced Qualitative Research Methods. 3 Credits.**

Building on content from EDU 620 (Qualitative Methods), this course requires students to deeply explore and apply the most important concepts involved in qualitative research, including: conceptual framework and research design, interviewing and observation, data analysis, and reporting analytic methods and findings.

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Students will engage directly with qualitative researchers, evaluate published qualitative studies, and apply design, data collection, analysis, and reporting concepts as they work on their own study. Level: Graduate

### **EDU 625 - Quantitative Research. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 625. Principles and technique of quantitative research in educational settings. Students prepare a draft of a research proposal and experience an abbreviated dissertation proposal defense. Level: Graduate

### **EDU 626 - Mixed Methods Research Design. 3 Credits.**

This is an advanced doctoral seminar that aims to provide a comprehensive overview of research design. This overview consists of understanding the preliminary considerations that go into selecting a qualitative, quantitative, or mixed methods research design. These include knowing the definition for these different approaches, considering philosophical worldviews, reviewing the literature, understanding the use of theory, anticipating ethical issues, and developing writing strategies. We will discuss the process of research as it relates to each approach. This process includes writing an introduction, specifying a purpose statement, and developing research questions and/or hypotheses. This course will also discuss the methods and procedures for quantitative, qualitative, and mixed methods studies. Level: Graduate

### **EDU 627 - Single Subject Research Designs. 3 Credits.**

This is an introductory level course concentrating on single-case designs for educational and therapeutic interventions in applied and clinical settings, data collection and graphing procedures, and visual inspection and inference of data along with statistical analysis. Level: Graduate

### **EDU 628 - Instrument Development for Research and Evaluation. 3 Credits.**

The purpose of this course is to explore instrument development as it relates to the social-behavioral sciences. Particular focus will be given to psychological and educational instruments, how tests are developed and how to determine the reliability and validity of instruments. The course explores instrument development as it relates to both research and program evaluation. Models of program evaluation will be explored and students will complete an evaluation of a program using at least one instrument he or she developed. Level: Graduate

### **EDU 630 - Special Topics in Literacy. 1-3 Credits.**

(R-3) Offered intermittently. Prereq., consent of instr. Should be taken in conjunction with or immediately prior to comprehensive examinations. In-depth coverage of selected topics in reading and writing related to current literacy issues and practices. Level: Graduate

### **EDU 652 - Issues of Curriculum & Instruction. 3 Credits.**

Offered autumn odd-numbered years. Prereq., EDU 501 or consent of instr. Curricular and instructional decision making and process, innovation and change, trends and reforms. Controversial issues in education and society related to K-12 curriculum and motivation. Level: Graduate

### **EDU 690 - Advanced Research. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

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### **EDU 694 - Advanced Seminar in Curriculum & Instruction. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

### **EDU 699 - Thesis/Dissertation. 1-10 Credits.**

(R-10) Offered every term. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Educational Leadership (EDLD)

### **EDLD 295 - Special Topics in Education Administration. 1-3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **EDLD 486 - Statistical Procedures in Education. 3 Credits.**

Offered autumn. Prereq., M 115 or equiv. or consent of instr. Concepts and procedures characterizing both descriptive and inferential statistics. Awareness of common statistical errors.

### **EDLD 495 - Special Topics. 1-9 Credits.**

(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **EDLD 502 - Philosophy of Education. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 502. Major philosophical schools of thought and leading proponents of each. Concepts of society, the educative process, and the role of education. Level: Graduate

### **EDLD 519 - Analysis of Education Data. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Explanation and practice in measurement and statistical analysis of educational data. Preparation in measurement and statistical analysis for educational research. Level: Graduate

### **EDLD 520 - Educational Research. 3 Credits.**

Offered every term. Same as EDU 520 and HHP 520. Open to graduate level students in Education Leadership, Counseling, or Curriculum and Instruction majors. An understanding of basic quantitative and qualitative research methodology and terminology, particularly as they are used in studies presented in the professional literature. Level: Graduate

### **EDLD 540 - Higher Education Finance. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Overview of how colleges and universities make financial and budgetary decisions; current trends in state and federal policy related to finance; contemporary problems in finance of education. Level: Graduate

### **EDLD 542 - The College Student. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Survey of today's college student including discussion of demographics, student development theories, learning theories, and contemporary issues on college campuses related to college students. Level: Graduate

### **EDLD 544 - The College Curriculum. 3 Credits.**

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Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Historical and contemporary development of college and university curriculum. Includes overview of pedagogical strategies, assessment, evaluation, and curricular change. Level: Graduate

### **EDLD 546 - Federal & State Higher Education Policy. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Overview of policies at the local, state, and national levels that affect the conduct of higher education; current trends in higher education policy; changes in educational policy; how policies affect different institutional types. Level: Graduate

### **EDLD 550 - Foundations of Educational Leadership. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Basic functions of K-12 administration and supervision and how contemporary views have evolved; models of leadership style and practice compared; responsibilities and relationships of school boards and chief school officers. Level: Graduate

### **EDLD 551 - Foundations of Curriculum Leadership. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. The history and theoretical bases of current K-12 curriculum and instructional leadership. Level: Graduate

### **EDLD 552 - Supervision and Evaluation of Public School Educators. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Conflicting views and models of supervision; supervision in relation to administration and evaluation. Development of instruments for the formative and summative evaluation of teaching and their use in simulated cases. Level: Graduate

### **EDLD 554 - School Law. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Key Montana and national legislation regarding public education. Landmark cases of the U.S. Supreme Court and other federal, regional, and state courts as they affect the operation of public schools and the rights of school board members, administrators, teachers, students, and parents. Level: Graduate

### **EDLD 556 - Finance of Public Education. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Revenue sources for K-12 public schools; proper expenditures; Montana's foundation program and related legislation; major court cases and how they have affected ways of funding schools; developing effective school and district budgets. Level: Graduate

### **EDLD 559 - School Public Relations-Principals. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Investigation of the appropriate leadership and management roles of the modern school principal as they relate to public relations. Understanding of political theory as it relates to developing and maintaining relationships with internal and external publics. Level: Graduate

### **EDLD 567 - K-12 Leadership. 3 Credits.**

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Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Examination of the roles responsibilities, and relationships of educators relative to management and leadership considerations at all levels of the educational organization (elementary, middle, secondary, and central office). Level: Graduate

### **EDLD 568 - K-12 Curriculum. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Major aspects of curriculum related to the duties and responsibilities of school administrators. Issues related to the development, review and evaluation of curriculum. Exploration of issues related to selected instructional models and practices; school improvement. Level: Graduate

### **EDLD 583 - Strategic Planning For Technology. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Leadership and strategic planning processes for technology integration within schools. Level: Graduate

### **EDLD 585 - Fieldwork Education Administration & Supervision. 2-3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Fieldwork at the school level (when the student is not completing an internship), with the cooperation of the principal and under the guidance of a University of Montana professor. Level: Graduate

### **EDLD 594 - Seminar. 1-9 Credits.**

(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Group analysis of problems in specific areas of education. Level: Graduate

### **EDLD 595 - Special Topics. 1-9 Credits.**

(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **EDLD 596 - Independent Study. 1-6 Credits.**

(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Consent of instructor. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **EDLD 597 - Research. 1-9 Credits.**

(R-10) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Consent of instructor. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **EDLD 598 - Internship. 1-12 Credits.**

(R-10) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **EDLD 599 - Professional Paper. 1-9 Credits.**

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(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Consent of instructor. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **EDLD 618 - Educational Statistics. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 618. Advanced statistical methods and use of the mainframe computer and microcomputer for data analysis. Use of a recognized statistical package for research applications. Level: Graduate

### **EDLD 620 - Qualitative Research. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 620. In-depth review of qualitative research methods, designs, and approaches. The development of a research proposal. Level: Graduate

### **EDLD 625 - Quantitative Research. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Same as EDU 625. Principles and technique of quantitative research in educational settings. Students prepare a draft of a research proposal and experience an abbreviated dissertation proposal defense. Level: Graduate

### **EDLD 653 - School Personnel Admin. 3 Credits.**

Prereq., consent of instructor required. Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Administration of classified and certificated school employees; personnel-related laws, functions, and decisions; unions, bargaining contracts, grievances, etc. Level: Graduate

### **EDLD 656 - The Economics of Education. 3 Credits.**

Prereq., consent of instructor required. School finance from a national perspective; alternative budgeting and school-revenue models; equity considerations. Level: Graduate

### **EDLD 657 - Facilities Planning/School Bus Function. 3 Credits.**

Prereq., consent of instructor required. Working with architects, school personnel, and others on educationally and financially sound plans for new and remodeled facilities; the school business official's responsibilities regarding buildings and grounds, maintenance and custodial services, transportation, food services, and the administration of classified personnel. Level: Graduate

### **EDLD 658 - School Pub Relations-Superintendents. 3 Credits.**

Prereq., consent of instructor required. Enhancing site- and district-level internal and external relations; conducting needs assessments, inservice workshops, and funding campaigns; improving administrators' writing, listening, and speaking skills; composing press releases and newsletters; working with the media. Level: Graduate

### **EDLD 660 - Adult Continuing Education. 3 Credits.**

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Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Adult learning theory and the special needs and motivations of adult learners in postsecondary institutions; principles and practices of administering postsecondary continuing education programs. Level: Graduate

### **EDLD 662 - History of Higher Education. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Survey of the historical roots of higher education from world and comparative perspectives; examination of the historic and contemporary missions, organizational structures, governance, and administration of various types of postsecondary and higher education institutions in America and abroad. Level: Graduate

### **EDLD 664 - The Community College. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. The organization and administration of American postsecondary education in two-year collegiate institutions; current trends in governance, finance, curriculum, faculty and students. Level: Graduate

### **EDLD 667 - American College Professor. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Investigation of the prevailing curriculum and instruction in American undergraduate and graduate education and consideration of reform reports. Level: Graduate

### **EDLD 668 - College & University Administration. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Administration of college and university programs, departments, and schools; the roles of program director or coordinator, department chairperson, dean, vice president, provost, president, chancellor, and commissioner. Level: Graduate

### **EDLD 670 - Best Practices in IPL. 3 Credits.**

Students explore the field of International Programs at the college or university level and seek current best practices. This course is designed to give students an understanding of the leadership and management activities required of leaders in the field of international programs. Level: Graduate

### **EDLD 672 - International Program Development. 3 Credits.**

Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. This course prepares professionals with the knowledge and practical skills needed to develop programs, seek external funding, and write proposals to support student and professional exchanges, study abroad, ESL and intensive language programs, internships, student services, partnership agreements, and other education and training activities in the international field. Level: Graduate

### **EDLD 673 - Leadership/Cultures. 3 Credits.**

The course introduces a methodology to support the emerging field of international and comparative educational leadership and management and is instrumental for students of educational leadership and management. Level: Graduate

### **EDLD 674 - Internship in College Technology. 1-3 Credits.**



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Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Provides an opportunity for guided and supervised teaching at the college level and assistance to the aspiring college teacher in meeting the needs of a diverse student population; assistance provided in methods of teaching at the college level, theories of learning, use of technology, and evaluation and assessment techniques. Level: Graduate

### **EDLD 676 - Internship in Higher Education Administration. 1-3 Credits.**

(R-6) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Supervised and guided work in an administrative unit/department at the college/university level. Level: Graduate

### **EDLD 677 - Globalization in Education. 3 Credits.**

Course explores globalization of education from the perspective of International Programs at the post-secondary level. This course is designed to prepare students for leadership positions in the field of International Programs and other related fields.

### **EDLD 679 - Linguistic Diversity. 3 Credits.**

Course explores policy issues related to linguistic diversity. This course is designed to help students develop a framework of global issues as they relate to, and are impacted by, linguistic diversity. Level: Graduate

### **EDLD 680 - Politics/International Education. 3 Credits.**

Course explores political issues related to International Programs. This course is designed to prepare students for the dynamic nature of political arena surrounding the development and implementation of postsecondary International Programs. Level: Graduate

### **EDLD 682 - Cross-Cultural Competence. 3 Credits.**

Blending both the practical and theoretical, this course offers you the requisite knowledge, the appropriate motivations, and the relevant skills to function competently with culturally-different others. Level: Graduate

### **EDLD 683 - International Perspectives. 3 Credits.**

This course primarily focuses on international students sharing their perspectives (including international academics and experienced practitioners). Topics include adaptation challenges, and the role that international students and faculty play in broader internationalization and diversity agendas within US higher education. Level: Graduate

### **EDLD 694 - Advanced Seminar: Education Administration/Supervision. 1-9 Credits.**

(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. A review and discussion of current research. Topics vary. Level: Graduate

### **EDLD 695 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

### **EDLD 697 - Advanced Research Education Administrative Supervision. 1-9 Credits.**

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(R-9) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **EDLD 699 - Professional Seminar/Dissertation. 1-12 Credits.**

(R-12) Open to graduate level students in Education Leadership, Counseling or Curriculum and Instruction majors. A review and discussion of current research. Topics vary. Level: Graduate

## Electrical Engineering (EELE) < University of Montana

### Electrical Engineering (EELE)

#### **EELE 201 - Circuits I for Engineering. 4 Credits.**

Prereq., PHSX 217N and EGEN 101. Introduction to circuit analysis; Ohm's and Kirchhoff's Laws; resistors, capacitors, inductors, dependent sources, ideal op-amps; the complete response of first order circuits; complex frequency and phasors; steady-state AC circuits, coupled inductors and ideal transformers.

#### **EELE 203 - Circuits II for Engineers. 4 Credits.**

Prereq., EELE 201; Coreq., M 274. Natural and forced response of R-L-C circuits, frequency response of R-L-C circuits and Bode plots, frequency response, slew-rate and DC imperfections of real op-amps; Laplace Transform, Fourier series and Fourier Transform techniques in circuit analysis; basic R-L-C and op-amp filters; two port networks.

#### **EELE 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

## Electronics Technology (ETEC)

### **ETEC 106 - AC Circuit Analysis. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Analysis of alternating current (AC) circuits and the behavior of capacitors, inductors, reactance, impedance, transformers, and signal filters. Laboratory experiments include circuit analysis, the use of proper measurement equipment, and troubleshooting.

### **ETEC 113 - Circuits Lab. 1 Credit.**

Offered autumn. Offered at Missoula College Prereq/Co-req., ETEC 105 and 106. Covers proper techniques of soldering and tool usage. Electronic technical language, hands on troubleshooting skills and basic electronic measurements are involved.

### **ETEC 191 - Special Topics. 1-6 Credits.**

(R-6) Offered Intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ETEC 213 - Power Systems Technology. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., ETEC 106, M 121, Prereq/Co-req., M 122. A review of the principles of electricity, magnetism, and transformer action; the application of these principles in the operation of single-phase and three-phase ac/dc motors, alternators, and generators; and the control methods for these electrical devices.

### **ETEC 214 - Energy Storage and Distribution. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq. ETEC 106, NRGY 101, and M 121 or consent of instructor. Studies storage and transport methods of different types of energy. Explores emergent technologies and mechanisms designed to enhance efficiency and safety, including `smart grid? technologies; assesses relative social, economic and environmental merits of each type of energy system in terms of its storage and distribution.

### **ETEC 240 - Robotics. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq. or Co-req., ETEC 250. Explores physical and operating characteristics of a robot. Topics include robot configurations, power supplies, control systems, end effectors, sensors, stepper motors and stepper controls. Robot programming also is covered and a typical robot is programmed to perform repetitive actions. Includes hands-on labs.

### **ETEC 245 - Digital Electronics. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., ETEC 250. Explores digital electronic circuits and devices that make up a computer system. Topics include binary and hexadecimal number systems, Boolean algebra and digital logic theory, simple logic circuits, combinational logic, and sequential logic. Also covered is the analog-to-digital and digital-to-analog interfaces between a digital system and the real (analog) world. Includes hands-on labs.

### **ETEC 250 - Solid State Electronics I. 4 Credits.**

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Offered spring. Offered at Missoula College. Prereq. ETEC 105. An introduction to semiconductor technologies used in solid state electronics with an emphasis on diodes and transistors. Classroom concepts are reinforced through lab-based experiments.

### **ETEC 260 - Data and Network Communication. 3 Credits.**

Offered autumn. Prereq., ETEC 250. Explores the principles, applications, and theory of data communication systems. Topics include communication concepts and terminology, analog and digital channel characteristics, signaling techniques for analog and digital data, communication codes, transmission media, and standards and protocols for various data communication systems including computer networks, and the public switched telephone network. Includes hands-on labs.

### **ETEC 265 - Control Systems. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., ETEC 250. The course provides a comprehensive coverage of components, circuits, instruments, and control techniques used in continuous and discrete automatic control systems, and focuses on basic principles, operation and applications. Programming, interfacing, and applications of programmable logic controllers are emphasized, including PLC hardware components, ladder logic diagram, fundamentals of PLC programming, and PLC interfacing and troubleshooting. Laboratory experiments and course projects are included in the course.

### **ETEC 270 - Wireless Communications. 4 Credits.**

Offered autumn. Prereq., ETEC 250. Explores audio and radio frequency (RF) circuits. Topics include AM and FM signal modulation and demodulation, RF transmitters, RF receivers, RF amplifiers, audio amplifiers, oscillators, mixers, and antennas. Includes hands-on labs.

### **ETEC 275 - Microprocessors and Microcontrollers. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., ETEC 250 and prereq/co-req., CSCI 113. The course introduces the fundamental concepts, basic principles of the architecture, organization, operation and applications of microprocessors and microcontrollers. Programming in assembly language and in C, and interfacing of microprocessor systems are emphasized. Laboratory experiments and course projects are included in the course to increase the hands-on skills of the students.

### **ETEC 291 - Special Topics. 1-6 Credits.**

(R-6) Offered Intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ETEC 292 - Independent Study. 1-6 Credits.**

### **ETEC 295 - Special Topics. 1-6 Credits.**

(R-6) Offered Intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ETEC 298 - Internship. 2 Credits.**

Offered intermittently. Offered at Missoula College. Consent of instructor required. Extended classroom experience providing practical application of classroom learning through on the job training in a student's field of study. This experience increases student skills, prepares them for initial employment, and increases occupational awareness and professionalism.

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**ETEC 299 - Electronics Capstone. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., ETEC 275. Completion of project prototypes. Includes comprehensive final project from conception to market.

## Emergency Care Provider (ECP)

### **ECP 102 - Wilderness First Aid. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ECP 120 - Emergency Medical Responder Lecture. 3 Credits.**

Development of knowledge of emergency care and CPR/AED techniques. Provides certifications by the Emergency Care & Safety Institute (ECSI) and the American Heart Association (AHA) upon successful completion.

### **ECP 121 - Emergency Medical Responder Lab. 1 Credit.**

Coreq., ECP 120. Development of knowledge of emergency care and CPR/AED techniques. In conjunction with ECP 120 provides certification by the American Academy of Orthopedic Surgeons and the American Heart Association upon successful completion.

### **ECP 122 - Wilderness First Responder. 2 Credits.**

Offered intermittently. Instruction in the prevention, recognition, and treatment of backcountry illness and injury. Successful students receive an Aerie Wilderness First Responder certification and an American Heart Association Heartsaver CPR certification. This course meets HHP department First Aid requirement but does not meet the CPR requirement.

### **ECP 130 - Emergency Medical Technician. 5 Credits.**

The purpose of this Emergency Medical Technician (EMT) course is to provide students with an academic working knowledge and skills to become state certified and Nationally Registered EMT. It provides the basic concepts of emergency care, and basic life support which are needed to function as an EMT.

### **ECP 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ECP 200 - Transition to Paramedic Care. 3 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Provides an opportunity to start learning the cognitive, psychomotor and behavioral differences between an EMT and Paramedic. Topics covered include roles and responsibilities of the paramedic, EMS systems, Licensure/recertification requirements, Medical legal, patient evaluation, radio communications, documentation, and current issues that impact EMS profession.

### **ECP 201 - Paramedic Fundamentals. 3 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Requires completion of all program pre-requisites and admission to program. Prepares the paramedic student in the basic knowledge and skills needed in the pre-hospital environment. Topics covered

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include roles and responsibilities of the paramedic, medical legal considerations, communications, rescue and disaster operations, initial patient assessment and management, airway management and ventilation, pathophysiology of shock, and emergency pharmacology.

### **ECP 202 - Paramedic Fundamentals Lab. 1 Credit.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 201. Completion of pre-requisites and admission to program required.

### **ECP 206 - EMS Case Studies. 4 Credits.**

Offered spring at Missoula College and Missoula Emergency Services. Requires completion of all program pre-requisites and admission to program. Provides an opportunity to study and manage trauma and respiratory emergencies from a case study perspective. Trauma topics covered include shock, head, spinal, thoracic, abdominal, burns, and environmental. Respiratory topics covered include asthma, emphysema, chronic bronchitis, pneumonia, pulmonary edema, and embolism.

### **ECP 207 - Cardiology. 4 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires completion of all program pre-requisites and admission to program. Provides an in-depth study in the pathophysiology and management of cardiovascular disease and related emergencies. Topics include anatomy and physiology of the heart and circulatory system, basics of electrophysiology, assessment of the cardiac patient, pathophysiology of atherosclerosis, specific conditions resulting from atherosclerotic heart disease, peripheral vascular emergencies, pharmacologic intervention, dysrhythmia recognition, and specific management of cardiac emergencies.

### **ECP 208 - Cardiology Lab & ACLS. 1 Credit.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires completion of all program pre-requisites and admission to program. The student practices and gains manipulative skills to satisfactorily manage the task in ECP 207. Upon completion, the student receives provider certification in Advanced Cardiac Life Support.

### **ECP 216 - Hospital Clinical I. 5 Credits.**

Offered spring at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prereq., ECP 200, ECP 201, ECP 202, ECP 207, and ECP 208. Provides the opportunity to apply, in a clinical setting, the didactic knowledge and skills developed in the classroom and lab. Serves as the first stage in assisting the student to become an employable EMS provider. Clinical skills addressed include patient assessment and evaluation, vital signs management, development of airway management skills, autopsy observation, development of communication skills, introduction to various skills necessary for patient care, and development of safety practices.

### **ECP 220 - Special Considerations. 1 Credit.**

Offered spring at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prereq., ECP 200, ECP 201, ECP 202, ECP 207, and ECP 208. Provides an opportunity to study and manage behavioral emergencies. Students are taught to recognize symptoms of abnormal behavior and responses. Students learn techniques to manage the suicide patient.



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### **ECP 221 - OB/Neonate/Pediatrics. 2 Credits.**

Offered spring at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prereq., ECP 200, ECP 201, ECP 202, ECP 207, and ECP 208. Provides the student with the opportunity to participate in normal and abnormal obstetrical problems. Anatomy and physiology of the female reproductive system, assessment of the gynecologic patient, deliveries (normal, abnormal and complicated), routine care of the neonate, care of the distressed infant, neonatal emergencies, and neonatal transport are addressed.

### **ECP 222 - OB/Neonate/Pediatric Lab/PALS/Stable. 1 Credit.**

Offered spring at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prereq., ECP 200, ECP 201, ECP 202, ECP 207, and ECP 208. Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 221. Upon completion, the student receives provider certification in Pediatric Advanced Life Support (PALS).

### **ECP 230 - Trauma. 2 Credits.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prereq., autumn and spring semesters of program. Provides an intense course in the pathophysiology and the management of trauma to include assessment of the trauma patient, management of head injuries, chest injuries, abdominal injuries, spinal injuries, orthopedic injuries, management of the multi-trauma patient, management of special airway problems, and current trends in trauma management.

### **ECP 232 - Pulmonary. 2 Credits.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Provides an in-depth study of the anatomy of the respiratory system, its relationship to the other systems of the body, the pathophysiology of diseases of the respiratory system, and treatment modalities of pulmonary disease. Topics included are anatomy of the respiratory system, measurements of pulmonary function, respiration and gas exchange, assessment of the respiratory system, pathophysiology and management of respiratory disorders, and principles and management of acute respiratory insufficiency.

### **ECP 233 - Trauma/Pulmonary Lab & PHTLS. 1 Credit.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 230 and ECP 232. Upon completion, the student receives provider certification in Pre-Hospital Trauma Life Support.

### **ECP 242 - Medical Considerations. 2 Credits.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Provides an intense course in the pathophysiology and management of medical emergencies to include endocrine, nervous system, the acute abdomen, anaphylaxis, toxicology and substance abuse, infectious diseases, environmental, geriatric and pediatric emergencies.

### **ECP 243 - Medical Lab. 1 Credit.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 242. Upon completion, the student receives provider certification in Advanced Medical Life Support.

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### **ECP 246 - Hospital Clinical II. 6 Credits.**

Offered summer at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. A continuation of the clinical skills initiated in ECP 216. Provides the opportunity to apply in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. Serves as a second stage in assisting the student to become an employable EMS provider. Clinical skills addressed include electrocardiology, assessment and management of acute and chronic disease, pediatric advanced life support skills, obstetrical and neonatal care, and behavioral intervention techniques.

### **ECP 247 - Hospital Clinical III. 6 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. A continuation of the clinical skills initiated in ECP 216 and ECP 246. Serves as a final stage in assisting the student to become an employable EMS provider. Cognitive, psychomotor, and affective evaluation skills addressed include patient assessment, history gathering, treatment prioritizing, diagnostic impression, protocol knowledge, written documentation, airway management, fluid/drug management, cardiac management, trauma/medical management, attitude, professionalism, assertiveness.

### **ECP 250 - NREMT Exam Preparation. 3 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prepares the paramedic student for the national registry paramedic exam. It is a review of the core curriculum taught throughout 2nd and 3rd semester of the paramedic program.

### **ECP 251 - NREMT Exam Preparation Lab. 1 Credit.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Prepares the paramedic student for the national registry paramedic exam. It is a review of the psychomotor skills taught throughout 2nd and 3rd semester of the paramedic program.

### **ECP 298 - Internship. 8 Credits.**

Offered autumn at Missoula College and Missoula Emergency Services. Requires admission to Paramedicine program. Provides the opportunity to apply in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. It serves as the final stage in assisting the student to become an employable EMS provider. Cognitive, psychomotor, and affective evaluation skills addressed include patient assessment, history gathering, treatment prioritizing, diagnostic impression, protocol knowledge, radio communication, written documentation, airway management, fluid/drug management, cardiac management, trauma/medical management, attitude, professionalism, assertiveness, team leader qualities.

### **ECP 331 - Wilderness EMT. 3 Credits.**

Offered intermittently. EMT-Basic curriculum with significantly more detail concerning care for patients in remote settings. Students must be 18 year old and never been convicted of a felony to qualify for certification. This course meets HHP department First Aid and CPR graduation requirements.

### **ECP 332 - EMT and Incident Management. 5 Credits.**

This course follows the DOT's National Registry of EMTs (NREMT) curriculum and is approved by the NREMT and the State of Montana Board of Medical Examiners. Incident management training includes mass-casualty incidents, extended rescue and evacuation scenarios. Clinical experience includes a two day health

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clinic in Costa Rica, ambulance and hospital emergency department clinical observations in Montana. Co-requisite courses PTRM 391 Wilderness Rescue and Survival Skills; PTRM 391 Wilderness Medicine and Risk Management.

## English - English Teaching (ENT)

**ENT 099 - Developmental. 1-99.99 Credits.**

**ENT 199 - Lower-Division Elective. 1-99.99 Credits.**

**ENT 296 - Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair. Special projects in English teaching. Only one 296 may be taken per semester. Course Attributes: English Course.

**ENT 298 - Internship. 1-3 Credits.**

Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

**ENT 395 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

**ENT 398 - Internship. 1-3 Credits.**

Offered every term. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

**ENT 399 - Upper-Division Elective. 1-99.99 Credits.**

**ENT 439 - Studies in Young Adult Literature. 3 Credits.**

Offered autumn. Reading of representative texts covering the history, genres, authors, and themes of literature for students in middle school and high school. Emphasis on literature circles, large and small group activities, integrated language arts strategies, author study, censorship, and text sets. Required of students pursuing secondary English major and minor teaching certificates.

**ENT 440 - Teaching Writing. 3 Credits.**

Offered autumn and spring. Prereq. or coreq., EDU 202. Emphasis on teaching writing in grades 5-12. Research about development and maturity of writers, overview of schools of writing/history of writing instruction, strategies for teaching writing as a process, elements of writing craft, criteria for assessing and responding to writing, peer-coaching methods, writing/reading workshops, the role of grammar in improving writing, writing/reading connections, assignment characteristics, and grading practices. Required of students pursuing secondary English major and minor teaching licenses.

**ENT 441 - Teaching, Reading, & Literature. 3 Credits.**

Offered autumn and spring. Prereq. or Coreq., ENT 439, EDU 395. Emphasis on various approaches to teaching reading and literature in grades 5-12. Research about the development and maturity of readers, strategies for teaching reading comprehension and vocabulary, strategies for diagnosing reading abilities

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and criteria for reading assessment, reading workshops/literature circles. Emphasis on various approaches to teaching literature: genre, inquiry, thematic, chronological and interdisciplinary. Includes techniques for developing responses to fiction, nonfiction, prose, poetry, film and other media. Focus on the design of lesson plans and curriculum using traditional/classic, contemporary, young adult, and multicultural literature in grades 5-12. Required of students pursuing secondary English major and minor teaching licenses.

### **ENT 442 - Teaching Oral Language & Media Literature. 3 Credits.**

Offered autumn and spring. Prereq. or coreq., LING 465, LING 270, LING 470, or EDU 395. Emphasis on preparation, implementation, and evaluation of teaching strategies and materials in grades 5-12. Includes learning objectives, teaching and learning styles, unit plans, print and non-print media, and creative drama. Explores student-centered curriculum, with emphasis on developmental abilities in speaking, listening and viewing, and multigenre/multimodal communication. Required of students pursuing secondary English major and minor teaching licenses.

### **ENT 495 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ENT 496 - Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair, and junior or senior standing. Special projects in English teaching. Only one 496 may be taken per semester.

### **ENT 498 - Internship. 1-3 Credits.**

Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **ENT 543 - Advanced Teaching Strategies for Young Adult Literature. 3 Credits.**

Offered intermittently. Selecting, reading, teaching, and evaluating young adult literature. Design of thematic units with emphasis on students' responses to literature. Presentation of multicultural literature, gender inquiry, social justice, censorship, and media issues. Level: Graduate

### **ENT 544 - Creative Drama English Class. 3 Credits.**

Offered intermittently. Designing, teaching and evaluating creative drama in the English language arts classroom. Emphasis on using creative drama as a learning strategy to teach literature, language, and all the language arts. Level: Graduate

### **ENT 545 - Theory and Pedagogy of Literacy. 3 Credits.**

Offered intermittently. Exploration of contemporary theories and effective strategies for teaching reading, literacy grades 5-16. Level: Graduate

### **ENT 547 - Advanced Teaching Strategies of Writing & Reading. 3 Credits.**

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Offered intermittently. Current research and best practices in teaching writing and reading in all content areas. Emphasis on writing and reading processes, workshops, conferences and portfolios. National and state standards, curriculum, and assessments in writing and reading are addressed. Level: Graduate

### **ENT 548 - Portfolios and Assessment. 3 Credits.**

Offered intermittently. Selecting, designing, and evaluating informal and formal assessments in English Language Arts. Exploration of portfolios as assessment strategies that align curriculum and instruction with standards. Focus on content and performance standards, evaluation criteria and rubrics, and role of reflection in teaching and learning. Level: Graduate

### **ENT 550 - Montana Writing Project. 2-9 Credits.**

(R-9) Offered summer. Prereq., special application and consent of director. Intensive program designed to increase the effectiveness of the teaching and learning of writing in all levels of education. For graduate students, K-12, and university level educators. Level: Graduate

### **ENT 552 - MWP Leadership Training. 2-9 Credits.**

(R-9) Offered summer. Prereq., special application and consent of director. Intensive leadership training for Montana Writing Project teacher-consultants in organizing professional development institutes, developing curriculum, and designing assessments that increases the effectiveness of teaching and learning of writing in all levels of education, pre-K-20. Level: Graduate

### **ENT 557 - The Holocaust and IEFA. 3 Credits.**

Offered intermittently. Prereq., special application and Consent of Instr. This course, intended for K-12 and college/university educators, is a collaboration between Montana Writing Project and the Holocaust Educators' Memorial to examine curricula and pedagogies for linking Holocaust Education and Indian Education for All through writing and literacy education. Level: Graduate

### **ENT 593 - Professional Paper. 1-4 Credits.**

(R-4) Offered every term. Prereq., consent of instr. In-house Professional paper for the Master of Arts in English (Teacher Option). Credit not allowed toward any other degree. Level: Graduate

### **ENT 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **ENT 596 - Graduate Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair. Special projects in English teaching. Only one independent study permitted per semester. Level: Graduate

### **ENT 598 - Internship. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Level: Graduate

## English - Literature (LIT)

### **LIT 110L - Introduction to Literature. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Prereq., WRIT 101 (or higher) or equivalent. Study of how readers make meaning of texts and how texts influence readers. Emphasis on interpreting literary texts: close reading, critical analysis and effective writing.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **LIT 120L - Poetry. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Prereq., WRIT 101 (or higher) or equivalent. An introduction to the techniques of reading and writing about poetry with emphasis on the lyric and other shorter forms.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **LIT 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LIT 236L - Literary Histories. 3 Credits.**

Offered every term. Prereq., WRIT 101 (or higher) or equivalent. Introduction to the study of literary works in an historical context or a sequence of historical contexts.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **LIT 246L - Genres, Themes, Approaches. 3 Credits.**

Offered every term. Prereq., WRIT 101 (or higher) or equivalent. Introduction to the study of literary works in terms of genres and broad themes.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **LIT 280L - Ecology of Literature. 3 Credits.**

Prereq., open to students enrolled in the Wilderness & Civilization program for the Wilderness Studies minor. Literary study of nature writing and other genres introducing an ecocritical perspective, with revolving Anglophone texts.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **LIT 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LIT 300 - Literary Criticism. 3 Credits.**

Offered every term. Prereq., WRIT 101 or equivalent, one intermediate writing course, and 6 credits of lower-division LIT or consent of instructor. Study of various literary theories and their application to literary texts.

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Gen Ed Attributes: Writing Course-Advanced

### **LIT 301 - Studies in Literary Forms. 3 Credits.**

(R-9) Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. Reading of various authors from different literary periods and cultures working in the same mode of composition (courses offered under this rubric may include Literature of Place, Modern Drama, 19th Century Fiction, 20th Century Fiction, Lyric Poetry, Science Fiction, Autobiography; less frequently, Travel Literature, Popular Fiction, Epic, Tragedy, Satire, Romance, Comedy).

### **LIT 304 - U.S. Writers of Color. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course and 6 credits of lower-division LIT or consent of instructor. Selected readings from African American, Asian American, Chicano/a, Latino/a, and Native American literatures.

Gen Ed Attributes: Writing Course-Advanced

### **LIT 305 - Literature by & About Native Americans. 3 Credits.**

Offered autumn. Prereq., 3 credits of lower-division LIT courses and NASX 105H or 235X. Same as NASX 340. Selected readings from Native American literature with special emphasis on the literature of writers from the Rocky Mountain west.

### **LIT 314 - The American Novel. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course and 6 credits of lower-division LIT or consent of instructor. Examination of a selection of American novels in their historical, cultural, and literary contexts. Exploration of literary movements such as realism, naturalism, modernism, and postmodernism. Discussion of critical theories and application to the texts.

Gen Ed Attributes: Writing Course-Advanced

### **LIT 315 - Voices of the American Renaissance. 3 Credits.**

Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. Perspectives on antebellum Native American, African American, and gender issues. Study of the poetry of Walt Whitman and Emily Dickinson in light of these three perspectives.

### **LIT 319E - Talking to God: Bhagavad Gita. 3 Credits.**

Offered every year or alternate year. Close reading of the Hindu Scripture, Bhagavad Gita, in translation, examining its ethical, literary, philosophical and religious dimensions, its influence on Western and Indian literary writers and thinkers, and the way Indian and Western commentators have interpreted and used it.

### **LIT 327 - Shakespeare. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course. A survey of selected Shakespeare plays emphasizing close reading of the texts and consideration of their dramatic possibilities. Gen Ed Attributes: Writing Course-Advanced

### **LIT 328 - Fathers & Daughters in Literature. 3 Credits.**



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Prereq., WRIT 101. Examines how relationships between fathers and daughters have been represented, celebrated and critiqued in literature in the Western world, from antiquity to the present. Includes discussion of changing patriarchal formations, symbolic and adoptive fatherhood, incestuous rape, homosexuality and role reversals. Texts include Greek tragedy, Shakespeare, romantic poetry, novel, and graphic novel. Both male and female authors.

### **LIT 331 - Major Author/s. 3 Credits.**

(R-9) Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. Intensive study of the life and works of one author writing in English (courses offered under this rubric have included Chaucer, Milton, Faulkner, Joyce, Twain; less frequently, Conrad, Hemingway, Blake, Woolf, D.H. Lawrence, Welty).

### **LIT 337L - Gender & Sexuality in English Fiction. 3 Credits.**

Offered alternate years. Major 20th century novels and short stories written in English by both men and women in different parts of the world, and how these texts explore changing concepts of gender and sexuality. Topics include heterosexuality, homosexuality, bisexuality, transformations, chastity, adultery, ageing, violence, growing up, adolescence and varying definitions of love.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **LIT 342 - Montana Writers. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course and 6 credits of lower-division LIT or consent of instructor. Examination of poems, stories, and novels by or about Montanans and the treatment and representation of race, place, class, gender, sexuality, and identity in Montana. Exploration of the myths and realities of Montana and the American West.

Gen Ed Attributes: Writing Course-Advanced

### **LIT 343 - African American Literature. 3 Credits.**

Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. Selected works by African-American authors. Course may define a narrowed focus such as poetry, women writers, etc.

Gen Ed Attributes: Writing Course-Advanced

### **LIT 344 - Asian American Literature. 3 Credits.**

Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. This course introduces both a variety of writings by Asian North American authors and major critical issues concerning the production and reception of Asian American texts, with an emphasis on the relation between literary forms and the Asian American socio-historical context, and on the historical formation of Asian American identities.

### **LIT 349L - Medieval Literature. 3 Credits.**

Offered alternate years. Exploration of literature from the medieval period, focusing on the major cultural and intellectual influences on the emergence of vernacular writing. Topics will vary, but will regularly include Anglo-Saxon literature and Middle English literature (excluding Chaucer).

Gen Ed Attributes: Lit & Artistic Studies (L)

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### **LIT 350L - Chaucer. 3 Credits.**

Offered alternate years. Critical reading of Chaucer's masterpiece, the Canterbury Tales, with attention to Chaucerian irony, the author's place in literary history, and issues in Chaucer studies.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **LIT 351 - Donne & His Followers. 3 Credits.**

Offered alternate years. Prereq., 6 credits of lower-division LIT or consent of instructor. Close study of John Donne and other early 17th century religious poets within the context of Renaissance intellectual history.

### **LIT 353L - Milton. 3 Credits.**

Offered alternate years. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Selected study of poetry and prose of Milton.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Advanced

### **LIT 355 - British Romanticism. 3 Credits.**

Offered alternate years. Prereq., 6 credits of lower-division LIT or consent of instructor. Introduction to the major texts, themes, and authors of British literature from 1790-1815, focusing on poets such as Blake, Barbauld, Wordsworth, Coleridge, and P.B. Shelley but attending also to prose writers from Austen to Mary Shelley.

### **LIT 363 - Modern Poetry. 3 Credits.**

Offered alternate years. Prereq., 6 credits of lower-division LIT or consent of instructor. Survey of modern poetry in English beginning with Emily Dickinson and Walt Whitman and moving toward the present, centering on modernist poets.

### **LIT 369 - Short Fiction. 3 Credits.**

Offered intermittently. Prereq., 6 credits of lower-division LIT or consent of instructor. Study of selected short stories and novellas from mid-19th century to the present.

### **LIT 370 - Science Fiction. 3 Credits.**

Offered intermittently. Study of the science fiction genre from its pulp magazine beginnings in the 1920s to the present.

### **LIT 373 - Literature & Environment. 3 Credits.**

Offered autumn. Prereq., 6 credits of lower-division LIT or consent of instructor. Study of major texts and issues in American nature writing.

### **LIT 376 - Literature & Other Disciplines. 3 Credits.**

(R-9) Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course and 6 credits of lower-division LIT or consent of instructor. Selected works of literature studied in conjunction with works of art, music, religion, philosophy, or another discipline (e.g. Film and Literature, Modernism, Literature and Science, Bible as Literature, Song).

Gen Ed Attributes: Writing Course-Advanced

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### **LIT 380 - Literary Approaches to Drama. 3 Credits.**

Offered intermittently. This course introduces students to dramatic literature, with an emphasis on dramatic elements and devices, and the continuity in the history/tradition of drama. Topics vary, determined by the instructor's special interests, and might focus on either US, British, or global drama.

### **LIT 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instructor. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LIT 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LIT 402 - Literature in Place. 3 Credits.**

Prereq., LIT 300 and 6 credits of LIT courses numbered 300 or higher or consent of instructor. This course gives students a set of advanced learning opportunities to engage with Anglophone texts on the general theme of nature and culture, applying an ecocritical lens to extended literary analysis. Drawing from various periods and from various trans-Atlantic national literatures, the course is designed to focus on the emerging critique of nature and culture that questions foundational structures of epistemology and economy, animate and inanimate, civilization and wilderness.

### **LIT 420 - Critical Theory. 3 Credits.**

(R-9) Offered autumn or spring. Prereq., LIT 300 and 6 credits in LIT courses numbered 300 or higher or consent of instructor. Study and application of one or more theoretical approaches to interpreting texts (e.g., aesthetic post-structural, new historicist, classical, Renaissance, Romantic, narrative, psychoanalytic, formalist, neo-Marxist, feminist, gender, cultural studies and reader-response theory).

### **LIT 422 - Ecocritical Theory & Practice. 3 Credits.**

This course surveys the developing field of ecocriticism, introducing students to the major issues and methodologies entailed in the study of literature and the environment.

### **LIT 430 - Studies in Comparative Literature. 3 Credits.**

(R-9) Offered intermittently. The study of important literary ideas, genres, trends and movements. Credit not allowed for the same topic in more than one course numbered 430, LSH 342.

### **LIT 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Consent of instructor. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LIT 492 - Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair, and junior or senior standing. Special projects in literature. Only one independent study may be taken per semester. Consent must be obtained prior to enrollment.

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### **LIT 494 - Seminar: Literature Capstone. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., WRIT 101 or equivalent, one intermediate writing course, LIT 300 and 9 credits in LIT courses numbered higher than 300. Required for completing the English literature option, this seminar will allow students to conduct advanced studies in literary figures and topics chosen by faculty to engage a broad range of interests. A long research paper is required.

Gen Ed Attributes: Writing Course-Advanced

### **LIT 499 - Thesis/capstone: Honors. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of chair. Preparation of a thesis or manuscript based on research for presentation and/or publication.

### **LIT 502 - Special Topics in Ecocriticism. 3 Credits.**

(R-9) This course is a central requirement for the English Department's graduate option in Ecocriticism. The course will vary by topic, but will link introductions to ecocritical theory with practice as it models how to apply ecocritical theory to the study of literature. Each offering will explore the interconnections between nature and culture, through the cultural artifacts language and literature. Although changing with the topic, in most cases the course considers the role race, class, and gender play in shaping discourses of nature. Further, consideration of non-Anglo-American traditions will be featured for many offerings. Level: Graduate

### **LIT 520 - Seminar in British Literature. 3 Credits.**

(R-9) Offered every autumn and spring. Prereq., graduate status or consent of instructor. Topics will vary. Level: Graduate

### **LIT 521 - Seminar in American Literature. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., graduate status or consent of instr. Topics will vary. Level: Graduate

### **LIT 522 - Seminar in Comparative Literature. 3 Credits.**

(R-9) Offered intermittently. Same as MCLG 522. Prereq., graduate status or consent of instructor. Topics will vary. Level: Graduate

### **LIT 524 - Nature, Language and Politics. 3 Credits.**

(R-9) Offered intermittently. Investigation of environmental, social and political thought from the perspectives of literature and ecocritical theory. Level: Graduate

### **LIT 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **LIT 596 - Graduate Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in literature. Only one 596 permitted per semester. Consent must be obtained prior to enrollment. Level: Graduate

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### **LIT 598 - Internship. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of faculty supervisor, department chair, and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **LIT 599 - Thesis. 1-6 Credits.**

(R-6) Offered every term. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## English Language Institute (ELI) < University of Montana

### English Language Institute (ELI)

**ELI 001 - English Language Instruction. 12.000 Credits.**

**ELI 095 - English Language Instruction. 6.000 Credits.**

**ELI 096 - English Language Instruction. 6.000 Credits.**

**ELI 097 - English Language Instruction. 1-6 Credits.**

**ELI 098 - English Language Instruction. 1-6 Credits.**

## English as an Academic Second Language (EASL)

### **EASL 195 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **EASL 250 - Intermediate English for Academic Purposes I: Written Production. 3 Credits.**

Offered autumn and spring. Prereq., score 525-549 Paper-Based TOEFL, 70-80 internet-based, 192-212 computer-based, IELTS 6.0; may not be taken at the same time as or after EASL 450 or WRIT 101. Concentration on reading, listening, notetaking, writing and study skills required for success in an American academic setting. Writing focus includes paragraph and essay structure (process & comparison patterns), basic research protocol, grammatical editing and citation. Student Option Grade Mode (traditional or credit/no credit).

### **EASL 251 - Intermediate English for Academic Purposes II: Spoken Production. 3 Credits.**

Offered autumn and spring. Prereq., score 525-549 Paper-Based TOEFL, 70-80 internet-based, 192-212 computer-based, IELTS 6.0; may not be taken at the same time as or after EASL 451 or WRIT 101. Concentration on reading, listening, notetaking, speaking and study skills required for success in an American academic setting. Speaking focus includes participating in and leading structured class discussions, and preparing formal presentations with appropriate research and technological support. Student Option Grade Mode (traditional or credit/no credit).

### **EASL 450 - Advanced English for Academic Purposes I: Written Production. 3 Credits.**

Offered autumn and spring. Prereq., score 550-574 Paper-Based TOEFL, 81-91 internet-based, 213-233 computer-based, IELTS 6.5, or EASL 250; may not be taken at the same time as or after WRIT 101. Concentration on reading, listening, notetaking, writing and study skills required for success in an American academic setting. Writing focus includes essay and research paper structure (cause/effect & argumentation patterns), basic research protocol, grammatical editing and citation. Student Option Grade Mode (traditional or credit/no credit).

### **EASL 451 - Advanced English for Academic Purposes II: Spoken Production. 3 Credits.**

Offered autumn and spring. Prereq., score 550-574 Paper-Based TOEFL, 81-91 internet-based, 213-233 computer-based, IELTS 6.5, or EASL 251; may not be taken at the same time as or after WRIT 101. Concentration on reading, listening, notetaking, speaking and study skills required for success in an American academic setting. Speaking focus includes participating in informal and structured debates, leading class discussions, extemporaneous speaking, and preparing formal presentations with appropriate research and technological support. Student Option Grade Mode (traditional or credit/no credit).

## Environmental Sciences (ENSC)

### **ENSC 105N - Environmental Science. 3 Credits.**

Offered autumn. Provides students with opportunities to use class knowledge to make a difference; helps students build all of the following: scientific literacy; skills in critical thinking, research and self-instruction; an understanding of the scientific basis of environmental issues, policies and laws; habits of sustainable living, scientifically-informed, active participation in social decisions, and service to their community and to the earth.

Gen Ed Attributes: Natural Science Course (N)

### **ENSC 291 - Special Topics/Experimental Courses. 1-6 Credits.**

(R-6) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

### **ENSC 360 - Applied Ecology. 3.000 Credits.**

Offered autumn. Prereq or coreq ENST 201. To succeed in this course, students also need college level courses in general biology, chemistry & statistics. Principles and concepts of ecology and how they can be applied to inform real life decisions about human interactions with the environment. Emphasizes the science of sustainability and the conservation of watersheds and biodiversity.

### **ENSC 391 - Special Topics/Experimental Courses. 1-9 Credits.**

(R 12) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, new courses, or one time offerings of current topics.

### **ENSC 398 - Cooperative Education/Intern. 1-6 Credits.**

Offered autumn and spring. Requires consent of instructor. Practical application of classroom learning through internship with governments, organizations or industry. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **ENSC 470 - Agroecology. 3 Credits.**

Offered Intermittently. Offering crucial tools for sustainability and resilience, agroecology is the study of ecological processes applied to food and agricultural systems. Students learn key concepts, scientific findings from the field, and how to apply agroecological principles.

### **ENSC 491 - Special Topics/Experimental Courses. 1-9 Credits.**

(R-9) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, new courses, or one time offerings of current topics.

### **ENSC 492 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Requires consent of instructor. Course material appropriate to the needs and objectives of the individual student.

### **ENSC 494 - Seminar/Workshop. 1-3 Credits.**



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(R-6) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. A seminar on a current environmental topic.

### **ENSC 495 - Field Study. 1-10 Credits.**

Offered autumn. Prereq or coreq ENSC 360. Designing, executing, interpreting and documenting field studies. Project oriented.

### **ENSC 501 - Scientific Approaches to Environmental Problems. 3 Credits.**

Offered autumn. Prereq., graduate standing in EVST or consent of instructor. The strength and limitations of the scientific approach to investigating and solving selected environmental problems with an emphasis on the natural sciences. Level: Graduate

### **ENSC 508 - Indigenous Health. 3 Credits.**

This graduate seminar will focus on learning about historic and contemporary environmental health issues, innovative programs that improve health and restoring the environments of Indigenous peoples. Level: Graduate

### **ENSC 540 - Watershed Conservation. 3 Credits.**

Offered autumn. Prereq., graduate standing or consent of instructor. Course assumes students have level of knowledge presented in a college level ecology course. Integrates watershed science, policy, planning, action and organizing. The science component explores watershed connections, evaluating change and assessing watershed condition. The policy component explains the scientific basis of national, state and local laws, programs and agencies that affect watersheds. The planning and action component discusses developing watershed conservation plans and selecting actions likely to address problems without creating other problems. The organizing component covers how to help watershed communities make choices, resolve conflicts, build commitment and find funding. Students work individually or in teams to assist Montana groups in developing watershed CPR plans, initiating monitoring projects, and/or conducting education projects. Level: Graduate

### **ENSC 550 - Pollution Ecology. 3 Credits.**

Offered spring even-numbered years. Prereq., graduate standing or consent of instructor. Course assumes students have level of knowledge presented in a college level ecology course. Examines sources, fate, and effects of pollutants on organisms and ecosystems; methods of measuring and predicting pollutant fate and effects, assessing and reducing risks, estimating ecosystem assimilation capacity; setting standards and restoring ecosystems damaged by pollution. Briefly examines some relevant laws and policies at the federal, state and local level. Level: Graduate

### **ENSC 551 - Environmental Field Study. 1-3 Credits.**

(R-3) Offered intermittently. Prereq. or coreq., ENSC 540 or 550 or ENST 560 or consent of instructor. Same as BIOB 551. Designing, executing and interpreting environmental field studies. Oriented to studies of aquatic systems and watersheds. Students will assist with a class project and may also pursue their own projects. Projects focus on the Clark Fork, Bitterroot and Blackfoot River basins. Level: Graduate

### **ENSC 593 - Professional Paper. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

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### **ENSC 594 - Graduate Seminar. 1-15 Credits.**

(R-15) Offered autumn and spring. Prereq., graduate standing. May be restricted to EVST majors. May require consent of instructor. In depth analysis of a current environmental topic. Different topics offered each semester. Level: Graduate

### **ENSC 595 - Special Topics. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., graduate standing. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, of new courses, or one-time offerings of current topics. Level: Graduate

### **ENSC 596 - Independent Study. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Work on selected problems by individual students under direct faculty supervision. Level: Graduate

### **ENSC 597 - Research. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Directed individual graduate research and study appropriate to background and objectives of the student. Level: Graduate

### **ENSC 598 - Internship. 1-8 Credits.**

(R-8) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Practical application of classroom learning during placements off campus. Level: Graduate

### **ENSC 599 - Thesis. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Environmental Studies (ENST)

### **ENST 191 - Special Topics. 1-9 Credits.**

(R 9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **ENST 201 - Environmental Info Resources. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent. Students learn how to find, evaluate and use existing information to increase understanding of environmental issues and resolve controversies. Students will research a subject using a variety of sources (refereed literature, government sources, internet sources, interviews); evaluate sources critically; write a literature review and give an oral presentation on their topic. Focus is on critical thinking and dealing with the information explosion.

Gen Ed Attributes: Writing Course-Intermediate

### **ENST 225S - Sustainable Communities. 3 Credits.**

Offered spring. Exploration of ways that communities promote sustainability and environmental health. Introduction of relevant social science concepts.

Gen Ed Attributes: Social Sciences Course (S), Democracy and Citizenship (Y)

### **ENST 230H - Nature and Society. 3 Credits.**

Offered autumn. Offered on Mountain Campus. Explores the relationship between ideas about nature and the development of political and social ideas, institutions, and practices, primarily in western (Euro-American) society. Complements ethics offerings in philosophy aimed at environmental studies majors.

Gen Ed Attributes: Historical Studies

### **ENST 231H - Nature and Society. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., WRIT 101 (or higher) or equivalent. Explores the relationship between ideas about nature and the development of political and social ideas, institutions, and practices in primarily western (Euro-American) society. Course is an elective for students in the 2-year AA and AAS degree programs. Gen Ed Attributes: Historical Studies, Writing course-Intermediate

Gen Ed Attributes: Historical Studies, Writing Course-Intermediate

### **ENST 291 - Special Topics/Experimental Courses. 1-9 Credits.**

(R-9) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, of new courses, or one-time offerings of current topics.

### **ENST 294 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. A review and discussion of current research. Topics vary.

### **ENST 310 - Environment Montana: A to Z. 3 Credits.**

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Offered spring. The environment of Montana has changed dramatically since its founding 150 years ago. The purpose of this course is to provide an introduction to the land, people and places of Montana as viewed through the lens of environmental change. It will explore environmental change in relation to the actions of human beings. It will also explore how federal policies intersect with Montana environmental stories. Through a combination of lectures, readings, focused in-class discussions, and a research project students will learn the environmental stories of Montana.

### **ENST 320E - Earth Ethics. 3 Credits.**

Offered intermittently. Prereq., ENST 230H or PHL 112E or consent of instructor. We often think of environmental issues primarily as issues of science and politics: what does science tell us about problems facing the environment, and how can politics help us respond? But environmental issues are simultaneously ethical issues with several moral dimensions: because each issue raises questions of how we should respond, exploring the moral dimensions of environmental issues can help us to discern better or worse responses, and to understand why we choose to respond as we do. In this course we will develop broad familiarity with different approaches within the field of environmental ethics in order to use a case study approach to examine a range of contemporary environmental issues. Students will have the opportunity to develop their own responses within a moral framework. By the end of the course students will have learned how to examine the moral dimensions of a range of environmental issues and how to ground their own perspectives within an ethical framework.

Gen Ed Attributes: Ethical & Human Values Course

### **ENST 335L - The Environmental Vision. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Provides background, overview, interpretations, and understanding of key concepts, themes, approaches, and forms in American nature and environmental nonfiction as well as that literature's response to and influence on environmental events, figures, and movements.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Advanced

### **ENST 367 - Environmental Politics & Policies. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Foundation in public lands history, bedrock environmental laws, policy processes and institutions. Research and analysis of current environmental and natural resource policy issues. Focus is domestic illustrated by case studies.

Gen Ed Attributes: Writing Course-Advanced

### **ENST 373A - Nature Works. 3 Credits.**

Offered spring. Writing workshop for the creation, critique, and revision of essays about the environment to include natural history, personal narrative, science interpretation, advocacy/editorial, place-based essay, and others. Examination of concepts, forms, and approaches to writing about environmental concerns, awareness and sensitivity. Reading and responding to published work, primarily from the perspective of technique and approach.

Gen Ed Attributes: Expressive Arts Course (A)

### **ENST 382 - Environmental Law. 3 Credits.**

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Offered spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Introduction to the history, law and theory of environmental regulation in the United States using public and private land regulation mechanisms as case studies. Basic principles of constitutional and administrative law relevant to environmental regulation, substantive public and private land use law and the history of environmental problems and their regulation.

Gen Ed Attributes: Writing Course-Advanced

### **ENST 391 - Special Topics/Experimental Courses. 1-12 Credits.**

(R-12) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, of new courses, or one-time offerings of current topics.

### **ENST 395 - Field Studies: Environmental Studies. 2-3 Credits.**

(R-12) Offered every term. Via extended backcountry travel, experiential examination of cultural history and public lands management, and how those affect ecosystem integrity. Investigation of personal roles in and relationships with human and ecological communities. Offered by the Wild Rockies Field Institute and Swan Valley Connections.

### **ENST 396 - Supervised Internship (PEAS). 2-10 Credits.**

(R-10) Offered Fall (2 cr.), Spring (2 cr.); Summer intensive, (6 cr.). Students learn small scale sustainable vegetable farming in a hands-on work environment at the PEAS farm (15 minute bike ride from campus). Lectures, readings and reflection inform the work. Summer students also visit local farms on once-a-week field trips. PEAS is repeatable, as the curriculum changes across the season, and students can attend any semester, though the 6 credit summer intensive course is the heart of the program.

### **ENST 398 - Cooperative Education/Intern. 1-6 Credits.**

Offered autumn and spring. Consent of instructor required. Practical application of classroom learning through internship with governments, organizations or industry. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **ENST 410 - TEK of Indigenous Peoples. 3 Credits.**

Offered autumn. Examines traditional ecological knowledge (TEK) of Indigenous peoples of North America and the world.

### **ENST 420 - US Environmental Movement. 3 Credits.**

Offered Intermittently. Study of the environmental movement as a social movement. Examination of different approaches to environmental protection and restoration in view of the movement's historical roots and contemporary debates.

### **ENST 427 - Social Issues: The Mekong Delta. 3 Credits.**

Offered intermittently. The course focuses on the history, culture, economy and environment of Vietnam, with particular emphasis on the Mekong Delta region. This is achieved through lectures from local professors at Can Tho University, active participation in field trips, the home stay, course readings, and synthesis through questions sets and discussions provided by University of Montana instructor. The goal of this half of

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the Vietnam study abroad program is to provide an understanding of the unique environments and the socio-economy of the Mekong Delta region to facilitate learning about the effects of climate change on these complex natural and anthropogenic systems. Co-convenes with ENST 514.

### **ENST 430 - Culture & Agriculture. 3 Credits.**

Offered intermittently. Surveys treatment of farmers and farming in the humanities. Course covers specific agricultural crops and their effect on social and environmental history, artistic commentary on agricultural life and farmer philosophy. Themes range from agriculturally influenced historical events to Wendell Berry's poetry to Albert Borgmann's philosophy.

### **ENST 437 - Climate Change: Mekong Delta. 3 Credits.**

Offered intermittently. This course focuses on the threats posed by climate change in Vietnam, with particular emphasis on the Mekong Delta region. This is achieved through lectures from Can Tho University professors, active participation in field trips, the homestay, course readings, and synthesis through questions sets and discussions provided by University of Montana instructor. The goal of this half of the Vietnam study abroad program is to provide an understanding of the potential impacts of climate change on the ecosystems and people of the Mekong Delta, and explore opportunities for people to adapt to and mitigate these impacts. Co-convenes with ENST 516.

### **ENST 472 - General Science: Conservation Education. 3 Credits.**

Offered autumn and spring. Prereq., admission to the Teacher Education Program. A study of the foundations of environmental science and conservation education with applications to community service and teaching.

### **ENST 476 - Community Sustainability in Practice. 3 Credits.**

Offered spring. Prereq., open to juniors, seniors, and graduate student only or by consent of instructor. Project-based, capstone-like course that develops student sustainability practice, leadership and environmental citizenship competencies. Level: Undergraduate-Graduate

### **ENST 480 - Food Justice and Sustainability. 3 Credits.**

Offered spring. Seminar course that examines the social justice, economic, and sustainability dimensions of the contemporary food system with a focus on the United States. Develops student understanding of the dominant food system and emerging alternatives.

### **ENST 487 - Globalization, Justice & Environment. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Study of current trends in economic globalization and its effects on efforts to work for social justice and environmental sustainability, particularly in the Global South. Examination of different models and theories of globalization, analysis of ethical issues raised, and assessment of alternatives proposed.

Gen Ed Attributes: Writing Course-Advanced

### **ENST 489S - Environmental Justice Issues & Solutions. 3 Credits.**

Offered autumn. Examination of evidence, causes and consequences of social inequality in the distribution of environmental risks and in access to natural resources and environmental amenities. Community, government and industry responses and service approaches for addressing environmental inequities.

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Gen Ed Attributes: Social Sciences Course (S)

### **ENST 491 - Special Topics/Experimental Courses. 1-12 Credits.**

(R-12) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, of new courses, or one-time offerings of current topics.

### **ENST 492 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Consent of instructor required. Course material appropriate to the needs and objectives of the individual student.

### **ENST 493 - Study Abroad: Environmental Justice Latin America. 3 Credits.**

Offered intermittently. Two week travel seminar to one or more Latin American countries to examine Latin American perspectives on environmental justice and efforts toward sustainable development within the context of the global economy and U. S. foreign policy. Required one-credit seminar offered spring semester to provide background readings.

### **ENST 494 - Seminar/Workshop. 1-3 Credits.**

(R-6) Offered intermittently. May be restricted to EVST majors. May require consent of instructor. A seminar on a current environmental topic.

### **ENST 499 - Senior Thesis/Capstone. 3 Credits.**

Offered intermittently. Prereq., senior standing in EVST. For seniors who want to design and perform a significant capstone project involving research and/or service. Students have responsibility for designing their projects which are subject to faculty approval. A final report and public presentation are required. Honors credit available.

### **ENST 505 - Literature of Nature Writing. 3 Credits.**

Offered intermittently. Prereq., graduate standing. Study of nature, environmental, and place-based writing, with emphasis on the American tradition and its relationship to twenty-first century environmental concerns, challenges, and opportunities, and to the current practice of nature and environmental writing. Level: Graduate

### **ENST 510 - Environmental Issues of Indigenous Peoples. 3 Credits.**

Offered intermittently. This graduate seminar provides an overview of environmental issues of Indigenous peoples from the 19th to 21st centuries. Level: Graduate

### **ENST 513 - Natural Resource Conflict Resolution. 3 Credits.**

Offered autumn. Same as NRSM 513 and LAW 613. Prereq., graduate standing. Examines the basic framework for preventing and resolving natural resource and environmental conflicts in America. Reviews the history of alternative approaches, emphasizes the theory and practice of collaboration, and considers future trends. This highly interactive course uses lectures, guest speakers, case studies, and simulations. Level: Graduate

### **ENST 514 - Social Issues:The Mekong Delta. 3 Credits.**

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Offered intermittently. This course focuses on the history, culture, economy and environment of Vietnam, with particular emphasis on the Mekong Delta region. This is achieved through lectures from local professors at Can Tho University, active participation in field trips, the home stay, course readings, independent graduate research, and synthesis through questions sets and discussions provided by University of Montana instructor. The goal of this half of the Vietnam study abroad program is to provide an understanding of the unique environments and the socio-economy of the Mekong Delta region to facilitate learning about the effects of climate change on these complex natural and anthropogenic systems. Co-convenes with ENST 427. Level: Graduate

### **ENST 515 - Environmental Negotiation Mediation. 3 Credits.**

Offered intermittently. Same as COMX 515, LAW 519 and NRSM 515. Prereq., graduate standing. This course prepares students to effectively engage in multiparty negotiation on natural resource and environmental issues. It is grounded in theory and provides an opportunity to develop practical skills in both negotiation and facilitation/mediation. Guest speakers, case studies, and simulations allow students to develop, test, and refine best practices. The course is fast-paced, highly interactive, and serves as the second of three required courses in the Natural Resources Conflict Resolution Program. Level: Graduate

### **ENST 516 - Climate Change: Mekong Delta. 3 Credits.**

Offered intermittently. This courses focuses on the threats posed by climate change in Vietnam, with particular emphasis on the Mekong Delta region. This is achieved through lectures from Can Tho University professors, active participation in field trips, field data collection, analysis and interpretation, the homestay, course readings, independent graduate research, and synthesis provided by University of Montana professors. The goal of this half of the Vietnam study abroad program is to provide an understanding of the potential impacts of climate change on the ecosystems and people of the Mekong Delta, and explore opportunities for people to adapt to and mitigate these impacts. Co-convenes with ENST 516. Level: Graduate

### **ENST 519 - Foundations of Change. 3 Credits.**

Offered autumn. Prereq., graduate standing in Environmental Studies. Designed for the first-year graduate cohort in Environmental Studies, this foundational course aims to strengthen participants' capacities to effectively meet today's environmental and social justice challenges. Our incoming cohort (around 20-25 in recent years) includes students from a wide variety of backgrounds. The course provides an introduction to the history and development of the environmental movement(s), as well as a theoretical understanding of democracy, citizenship, power, and social change. Participants will also explore their own sense of personal purpose and develop community. Level: Graduate

### **ENST 520 - Environmental Organizing. 3 Credits.**

Offered intermittently. Prereq., graduate standing. Developing understanding of and skills in community and environmental organizing. Emphasis on theory and practice of civic engagement and social change with a focus on developing and running campaigns and working in a group. Team projects. Level: Graduate

### **ENST 521 - Foundation in Environmental Education. 3 Credits.**

Offered autumn. Prereq., graduate standing in environmental studies. Same as C&I 521. Problem-solving approaches to environmental education; problem identification, research and design and implementation of an educational approach to selected environmental issues. Level: Graduate

### **ENST 530 - The Greening of Religion. 3 Credits.**



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Offered yearly. A critical examination of different religious traditions' views on nature and society, and contemporary religious traditions' responses to environmental issues. Level: Graduate

### **ENST 535 - Local Climate Solutions. 3 Credits.**

Offered intermittently. This course seeks to develop students' understanding and skills for participating in local solutions to climate change that can also support broader conservation, efficiency and sustainability efforts. This will be accomplished by engaging in planning and carrying out group projects that further advance existing climate change mitigation or adaptation efforts. Level: Graduate

### **ENST 537 - Building Effective Environment Organizations. 3 Credits.**

Offered intermittently. Prereq., graduate standing. Focus on the tasks and skills necessary to building and managing effective environmental organizations, particularly non-profit. Budgeting, fund-raising, grant-writing, attracting and utilizing volunteers, working with the media. Strategic approaches and how they are shaped by issue, context, and structure. Level: Graduate

### **ENST 542 - Conservation Without Borders. 3 Credits.**

Offered intermittently in autumn. Prereq., graduate standing in environmental studies program. Review of the political systems and administrative systems of each country relevant to natural resource policy decision-making and ecological systems. Study theory of integration of conservation with management such as common pool resource management, transboundary protected areas and international agreements. Review pertinent literature, interact with stakeholders, and produce group reports. Level: Graduate

### **ENST 548 - Supervision and Teaching Environmental Education. 3 Credits.**

Offered intermittently. Design, selection and evaluation of materials for the teaching of environmental education. Level: Graduate

### **ENST 555 - Research Methods for Social Change. 3 Credits.**

Offered intermittently. Prereq., graduate standing. Introduction to qualitative methods of research design, data collection, and analysis. Emphasis on research that facilitates and documents social change processes. Hands-on research experience through fieldwork projects. Includes instruction on writing social science and on research ethics. Level: Graduate

### **ENST 560 - Environmental Impact Analysis. 3 Credits.**

Offered intermittently. Prereq., graduate standing or consent of instructor. Covers legal and scientific aspects of the Environmental Impact Analysis (EIA) including: What is required by international, national and state law and regulations? How does one organize an effective interdisciplinary team research effort and public participation program? What scientific tools are used in EIA? How could EIA process be improved? Level: Graduate

### **ENST 561 - Land Use Law. 3 Credits.**

Offered autumn. Same as GPHY 561 and LAW 687. Prereq., graduate standing. Basic overview of the law of land use planning including background in the traditional governmental regulatory, proprietary, and fiscal land use tools. Examination of modern techniques for land use planning; consideration of constitutional limits of authority of state and local governments. Focus on skills in interpreting, drafting and applying state legislation and local ordinances. Level: Graduate

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### **ENST 563 - Introduction to Environmental Law. 3 Credits.**

Offered autumn. Prereq., graduate standing in EVST. Same as LAW 650. Philosophy and values underlying environmental regulation, basic introduction to administrative law, in-depth study of air and water pollution and the environmental policy acts. Level: Graduate

### **ENST 564 - Advanced Environmental Law. 3 Credits.**

Offered autumn. Prereq., graduate standing in EVST. Same as LAW 649. In-depth study of the laws addressing toxic substances and solid and hazardous waste, and the Endangered Species Act. Exploration of interaction between land use regulation and environmental law. Level: Graduate

### **ENST 565 - Public Land & Resources Law. 3 Credits.**

Offered spring. Prereq., graduate standing in EVST and consent of instr. Same as LAW 654. Historical development of United States public land law, state-federal relations, and the roles of Congress, the executive and the courts; the law applying to specific public land resources: water, minerals, timber, range, and preservation. Level: Graduate

### **ENST 567 - Water Law. 3 Credits.**

Offered spring. Same as LAW 663. Prereq., graduate standing. Interstate water problems; federal/state powers; federal/Indian water rights/Montana water law. Level: Graduate

### **ENST 570 - Ethics & Restoration. 3 Credits.**

Offered autumn. Prereq., graduate level or consent of instr. A critical examination of the ethical issues that emerge in the field of ecological restoration, and decisions to manipulate nature intentionally for social and ecological goals. Level: Graduate

### **ENST 573 - Environmental Writing. 3 Credits.**

Offered autumn. Prereq., graduate standing. Writing workshop designed to improve skills in writing on environmental topics for general audiences. Approaches include personal narrative, natural history, science interpretation, advocacy/argument, place-based essays. Includes analysis of published work from the perspective of technique and craft. Level: Graduate

### **ENST 579 - Collaborative Conservation. 3 Credits.**

(R-4) Offered every semester. Same as NRSM 579 and LAW 679. Prereq., ENST 513, LAW 613, or NRSM 513 or consent of instructor. Designed as the capstone experience of the Natural Resources Conflict Resolution Program. Provides practical experience in multi-party collaboration and conflict resolution. Students may design their own project in consultation with the director of the NRCR Program, or participate in a project organized and convened by faculty. Projects may be conducted year-round. Level: Graduate

### **ENST 580 - The Politics of Food. 3 Credits.**

Offered intermittently. This seminar explores social, economic, and ecological issues related to the contemporary food and agricultural system and alternatives to that system. Level: Graduate

### **ENST 589 - Environmental Justice Issues. 3 Credits.**

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Course co-convenes with ENST 489S. Course examines how and why environmental burdens, amenities, and services are inequitably distributed among various segments of society and approaches to addressing environmental inequalities and discrimination in environmental decision making. Level: Graduate

### **ENST 590 - Supervised Internship PEAS. 8 Credits.**

(R-8) Spring and autumn, 2 cr.; summer intensive, 3 cr. Prereq., graduate standing. Students learn small scale sustainable vegetable farming in a hands-on work environment at the PEAS farm (15 minute bike ride from campus). Lectures, readings and reflection inform the work. Summer students also visit local farms on a once-a week field trips. PEAS is repeatable, as the curriculum changes across the season, and students can attend any semester, though the 3 credit (grad level) summer intensive course is the heart of the program. Level: Graduate

### **ENST 591 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ENST 593 - Professional Paper. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **ENST 594 - Graduate Seminar. 1-15 Credits.**

(R-15) Offered autumn and spring. Prereq., graduate standing. May be restricted to EVST majors. May require consent of instructor. In-depth analysis of a current environmental topic. Different topics offered each semester. Level: Graduate

### **ENST 595 - Special Topics. 9.000 Credits.**

(R-9) Offered autumn and spring. Prereq., graduate standing. May be restricted to EVST majors. May require consent of instructor. Experimental offerings of visiting professors, of new courses, or one-time offerings of current topics. Level: Graduate

### **ENST 596 - Independent Study. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Work on selected problems by individual students under direct faculty supervision. Level: Graduate

### **ENST 597 - Research. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Directed individual graduate research and study appropriate to background and objectives of the student. Level: Graduate

### **ENST 598 - Internship. 1-8 Credits.**

(R-8) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Practical application of classroom learning during placements off campus. Level: Graduate

### **ENST 599 - Thesis. 1-6 Credits.**

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(R-6) Offered autumn and spring. Prereq., graduate standing in EVST and consent of instructor. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Facility Management Engineering (FME)

### **FME 122 - Electricity. 6 Credits.**

Offered spring. Offered at Missoula College. The electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, load, panels, feeders, lamps, motors, and fuses. Introduction to wiring methods and materials in conformance with the National Electric Code (NEC). Includes installation and replacement of light fixtures, heaters, GFCI's, switches, receptacles, raceways and electrical thermostats.

### **FME 123 - Carpentry. 6 Credits.**

Offered autumn. Offered at Missoula College. Application of carpentry principles and techniques. Construction and maintenance of foundation, floor, wall, ceiling, and roof systems. Includes safe use of tools and materials common to the industry. Additional topics are painting, masonry, insulation, and ventilation of commercial buildings.

### **FME 127 - High/Low Pressure Boilers. 3 Credits.**

Offered autumn. Offered at Missoula College. The fundamentals of high/low pressure boiler operation and maintenance. Covers steam, feed-water, fuel, and draft systems. Includes boiler water treatment and hot water heating systems. Introduces safe mechanical operating procedures used in the industry. This course allows students to sit for the Third Class Boiler License Exam with 40 hours of hands-on training verses the 960 hours required by the state.

### **FME 128 - Plumbing & Maintenance. 3 Credits.**

Offered autumn. Offered at Missoula College. Maintenance principles pertaining to lawns, groundcovers, trees, swimming pools, and plumbing equipment. Emphasis is placed on safe application of chemicals; maintenance frequency; and the identification and safe uses of associated tools and materials.

### **FME 130 - Heating & Air Conditioning. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., FME 122. The fundamentals of heating, ventilating, and air conditioning. Covers heating and refrigeration cycles, gas furnaces, refrigerants, system evacuation and charging, and components used in associated systems. Introduces the basic mechanical service procedures used in the industry. Students will also sit for the Universal 608 EPA exam.

### **FME 191 - Special Topics. 1-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **FME 192 - Independent Study. 1-6 Credits.**

(R-6) Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## Film (FILM)

### **FILM 103 - Introduction to Film. 3 Credits.**

Offered every term. The history and development of the film medium. Emphasis on critical analysis of selected classic or significant films.

### **FILM 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FILM 271 - Film & Literature. 3 Credits.**

(R-6) Offered intermittently. Studies of the relationship between film and literature. Topics vary.

### **FILM 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FILM 300 - History of Film. 3 Credits.**

Offered every year. Prereq., FILM 103L, LIT 270L. Survey of film history.

### **FILM 308 - Russian Cinema and Culture. 3 Credits.**

Offered intermittently. Topically arranged introduction to the cinema of Russia and the former Soviet Union, with particular emphasis on contemporary Russian cinema. Screening preceded by brief cultural and historical background lectures and followed by group and paired discussion. All films screened with English subtitles. No knowledge of Russian is necessary.

### **FILM 320 - Shakespeare and Film. 3 Credits.**

Offered once a year. Prereq., WRIT 101 (or higher) or equivalent. A survey of selected Shakespeare plays emphasizing close reading of the texts and consideration of their dramatic possibilities in relation to film.

Gen Ed Attributes: Writing Course-Intermediate

### **FILM 327 - Film Genres. 3 Credits.**

(R-9) Offered every other year. Prereq. FILM 103L. Intensive study of central works within one major film genre.

### **FILM 365 - Latin American Civilization Through Literature & Film. 3 Credits.**

Offered in autumn odd-numbered years. The development of the traditional society of Latin American civilization through the interaction of European, Indian and African elements.

### **FILM 381 - Studies in the Film. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., FILM 103L or consent of instr. Studies in genres, directors, movements, problems, etc.

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### **FILM 391 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FILM 392 - Independent Study. 1-6 Credits.**

(R-6) Offered Intermittently. Consent of Instructor Required.

### **FILM 447 - Film Theory. 3 Credits.**

Offered yearly. This course examines key approaches to film theory and criticism, and the theoretical roots of each. Classic and contemporary films will be assessed in the light of the theories covered.

### **FILM 448 - Documentary: Theory and Practice. 3 Credits.**

Offered yearly. Same as MAR 443. Designed to bring together Film Studies students (theorists) and Media Arts students (filmmakers) so they may draw from their respective fields to collaborate on the production of documentaries. After exposure to both documentary history and criticism, students will work with a team of producers in learning the basic skills involved in documentary production.

### **FILM 481 - Advanced Studies in Film. 3 Credits.**

(R-9) Offered every other year. Studies in film aesthetics, politics of film, international cinema and comparative film analyses.

### **FILM 484 - Film Directors. 3 Credits.**

(R-9) Offered every year. Prereq. FILM 103L. Intensive study of the life and work of one major film director.

### **FILM 491 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics

### **FILM 492 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Preq., consent of instr. and department chair, and junior or senior standing. Special Projects in film. Only one 492 may be taken per semester.

### **FILM 495 - Practicum. 1-6 Credits.**

R-6

### **FILM 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and department chair. Special projects in film. Level: Graduate

## Fish, Wildlife Science & Management (WILD)

### **WILD 105N - Wildlife & People. 3 Credits.**

Offered autumn. Intended for non-wildlife biology majors. Interactions of wildlife and people in today's society.

Gen Ed Attributes: Natural Science Course (N)

### **WILD 170 - Fish & Wildlife Interest Group. 1 Credit.**

Offered autumn. Discussion section for incoming students.

### **WILD 180 - Careers in Wildlife Biology. 2 Credits.**

Offered autumn and spring. Subject matter and fields of study within wildlife biology conservation and management. Topics to include wildlife ecology, aquatic ecology, human dimensions, conservation and management, and other opportunities for careers in wildlife biology.

### **WILD 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WILD 230 - Conservation Science. 3 Credits.**

Prereq., BIOC 105N or BIOC 101N or BIOB 160N or BIOB 170N or BIOE 172N or consent of instructor. The goal of this class is to introduce students to major issues related to the conservation of biodiversity. Lectures will illustrate how science can be used to identify and solve conservation problems. Lectures will cover current threats to biodiversity (human population growth, extinctions, habitat destruction, degradation and fragmentation, overexploitation, invasive species, global climate change) and discuss how science can be used to help ameliorate these impacts.

### **WILD 240 - Intro to Biostatistics. 3 Credits.**

Offered autumn. Prereq., calculus and consent of instr. Introduction to statistical ecology: distributions, hypothesis testing, and fitting models to data with emphasis on problems in ecological sampling.

### **WILD 275 - Wildlife Conservation. 2 Credits.**

Offered spring. Prereq., sophomore standing or consent of instr. Principles of animal ecology and framework of wildlife administration as a basis for the conservation of wild birds and animals, and biodiversity. Intended for non-wildlife biology majors.

### **WILD 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WILD 346 - Wildlife Physiological Ecology. 3 Credits.**



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Offered autumn. Prereq., BIOB 272. Only open to Wildlife Biology Majors. How physiological and biochemical processes in animals influence behavior and ecology. Application of physiological approaches to wildlife conservation such as assessment of animal health, nutritional condition, and physiological performance.

### **WILD 370 - Wildlife Habitat Conservation & Management. 4.000 Credits.**

Offered autumn and spring. Prereq., junior/senior standing in wildlife biology, STAT 216 or WILD 240, BIOE 370, or consent of instr. Application of principles of wildlife biology to conservation and management of wild bird and mammal habitats including statistical and field applications.

### **WILD 374 - Hunter Check Station. 1 Credit.**

(R-2) Offered autumn. Students learn techniques for determining species, age and sex of game animals, then work 3-5 days as volunteers at hunter check stations operated by management agencies.

### **WILD 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WILD 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Course material appropriate to the needs and objectives of the individual student.

### **WILD 398 - Internship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **WILD 408 - Advanced Fisheries. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent and BIOO 340. Quantitative analysis and interpretation of fish populations and community data for use in management. Selection, application and evaluation of management techniques. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **WILD 410 - Wildlife Policy & Biopolitics. 3 Credits.**

Offered spring, odd years. Prereq., junior standing. Overview of the laws affecting wildlife and how those laws are initiated, implemented, and enforced; impact of politics, interest groups, and agency jurisdictions. Level: Undergraduate-Graduate

### **WILD 460 - International Wildlife Conservation Issues. 2 Credits.**

Offered spring. Review of major international wildlife conservation issues with emphasis on the social context of the issues and applied solutions. Level: Undergraduate-Graduate

### **WILD 470 - Conservation of Wildlife Populations. 4 Credits.**

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Offered autumn and spring. Prereq., WRIT 101 or equivalent, BIOE 370, M 162 or M 171, STAT 216 or WILD 240, and senior standing in Biology, Forestry, Resource Conservation, Recreation Management or Wildlife Biology. Application of population ecology principles and theory to the conservation and management of wildlife populations. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **WILD 472 - Wildlife Handling & Chemical Immobilization. 2 Credits.**

Offered spring. Principles of wildlife chemical immobilization for researchers and managers. Ethical and legal issues, field organization, animal care and handling, immobilizing drugs, drug delivery systems, animal monitoring and veterinary emergencies. No labs. Level: Undergraduate-Graduate

### **WILD 480 - The Upshot--Applied Wildlife Management. 3 Credits.**

Offered spring. Prereq/Coreq., WILD 370 or WILD 470. Designed for students to apply their knowledge in the development of wildlife management planning. Level: Undergraduate-Graduate

### **WILD 485 - Aquatic Invertebrate Ecology. 3 Credits.**

Offered autumn. This course is designed to provide students an understanding of the life histories, ecology and importance of macroinvertebrates in freshwater aquatic systems. The primary focus will be on insects, although an introduction to other invertebrates will also be included. The lab portion will involve identification of major groups of aquatic macroinvertebrates and participation in an environmental assessment using invertebrates as indicators of stream condition and restoration efficacy. Level: Undergraduate

### **WILD 491 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **WILD 492 - Independent Study. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Original investigations or problems not related to student's thesis. Level: Undergraduate

### **WILD 494 - Senior Wildlife Seminar. 1 Credit.**

Offered autumn and spring. Prereq., senior standing in wildlife biology or consent of instr. Analysis and discussion led by students of current topics in wildlife biology. Level: Undergraduate-Graduate

### **WILD 498 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate

### **WILD 499 - Thesis. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr.; senior standing. Preparation of major paper based on study or research of a topic selected with an advisor according to needs and objectives of student. Level: Undergraduate

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### **WILD 540 - Research Design. 3 Credits.**

Offered autumn. Prereq., introductory statistics course or consent of instr. Examination of study designs for experiments, quasiexperiments, observational studies, and sampling surveys with an emphasis on application. Level: Graduate

### **WILD 541 - Research Design Lab. 1 Credit.**

(R-3) Coreq., WILD 540. Students will be expected to learn R programming skills, R data management and R graphing functions as well an introduction to statistical analysis in R.

### **WILD 542 - Statistical Applications in Wildlife Biology. 1-2 Credits.**

(R-5) Offered autumn odd-numbered years. Explores statistical problems encountered by wildlife biology and ecology graduate students. Students will bring statistical problems of interest to class where, as a group, we will explore analysis options, assumptions, pitfalls, and alternative solutions. Level: Graduate

### **WILD 545 - Strong Inference Science. 1 Credit.**

(R-7) Offered every fall. Graduate level, or consent of instructor for advanced undergraduates. Teach principles and philosophy of conducting strong inference science. Practical application to students own thesis research. Level: Graduate

### **WILD 560 - Landscape Conservation. 3 Credits.**

Offered spring. Examination of how various spatial and temporal scales influence wildlife and their habitats. Level: Graduate

### **WILD 562 - Wildlife Habitat Modeling. 4.000 Credits.**

Offered spring, odd years. Prereq., consent of instr. A survey of theory and applications in the study of resource selection by animals. Level: Graduate

### **WILD 563 - Topics in Habitat Ecology. 1 Credit.**

(R-15) Offered every term. Prereq., consent of instr. Discussion of recent scientific papers on advances in ecology, conservation, and population dynamics as related to habitat ecology and conservation. WILD 562 or equivalent strongly recommended. Level: Graduate

### **WILD 568 - Topics in Aquatic Ecology. 1 Credit.**

(R-15) Offered every term. Prereq., consent of instr. Review and synthesis of the scientific literature current issues and analyses in aquatic ecology. We assume a general understanding of fish biology, aquatic ecology, as well as a background in population, community and ecosystem ecological concepts. Level: Graduate

### **WILD 571 - Estimation of Demographic Parameters. 4 Credits.**

Offered autumn of even years. Examines methods for estimating demographic parameters of wildlife populations including survival, fecundity, abundance, and movement. Considers theory of capture-recapture and count-based modeling. Includes maximum likelihood and Bayesian treatments of the problems.

### **WILD 594 - Graduate Seminar in Wildlife Biology. 1 Credit.**

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(R-15) Offered autumn and spring. Prereq., graduate standing in wildlife biology or Fish Wildlife Biology or consent of instr. Analysis of selected problems in wildlife biology and conservation. Level: Graduate

### **WILD 595 - Special Topics. 1-12 Credits.**

(R-20) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

### **WILD 596 - Independent Study. 1-15 Credits.**

(R-15) Offered every term. Prereq., graduate standing and consent of instr. Original investigations or problems not related to student's thesis. Level: Graduate

### **WILD 597 - Research. 1-15 Credits.**

(R-15) Offered every term. Prereq., graduate standing in wildlife biology or consent of instr. Graded pass/not pass only. Level: Graduate

### **WILD 599 - Professional Paper. 1-15 Credits.**

(R-15) Offered every term. Prereq., graduate standing in wildlife biology and consent of instr. Professional paper written in the area of the student's major interest based on either primary or secondary research. Subject matter must be approved by graduate committee. Graded pass/not pass only. Level: Graduate

### **WILD 697 - Research. 1-20 Credits.**

(R-20) Offered every term. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **WILD 699 - Thesis. 1-20 Credits.**

(R-20) Offered every term. Prereq., graduate standing in wildlife biology. Preparation of thesis. Level: Graduate

## Forestry (FORS)

### **FORS 130 - Intro Forestry Field Skills. 2 Credits.**

Offered autumn. This course is focused on developing introductory forestry field skills through experiential learning at the Colleges Lubrecht Experimental Forest. Classroom lecture and experiences that introduce students to orienteering, map reading, GPS, tree measurements, fire and fuels management, recreation, human dimensions, hydrology, wood products, and the careers possible with a Forestry degree.

### **FORS 140 - Urban Forestry. 2 Credits.**

Offered spring. An introduction to urban forestry principles and practices. Benefits of the urban forest. Topics covered include plant species selection, site design, site assessment, planting, watering, fertilization, insects and diseases, pruning and tree care, inventory of property values, and community forestry development.

### **FORS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FORS 192 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Problems course designed to allow individual research at the undergraduate level.

### **FORS 201 - Forest Biometrics. 3 Credits.**

Offered autumn. Prereq., M 115 or M 121 or M 122 or M 151 or M 162 or M 171 or M 172. Introduction to probability and statistical methods for forestry and environmental sciences covering natural resource applications of common probability distributions, data analysis, hypothesis testing, and regression.

### **FORS 202 - Forest Mensuration. 3 Credits.**

Offered spring. Prereq., M 121 and M 122 or M 151 or M 162 or M 171 or M 172; and either prereq. or coreq. FORS 201 or STAT 216 or SOCI 202 or WILD 240. The theory and practice of timber inventory and growth projection, including field measurements, sampling procedures, statistical methods, inventory compilation, and stand growth simulation under specified management prescriptions. Stand growth under specified management prescriptions.

### **FORS 230 - Fire Management & Environmental Change. 3 Credits.**

Offered Spring. Introduction to wildland fire and its role as a transformative process in the environment. Topics include pyrogeography, fire behavior, fire ecology, fire policy, and fire management. Examines the role of fire in shaping ecological and social systems, with a focus on societal issues of natural resources, human health, land use, climate change, and economics. Provides foundational understanding of first principles. Serves as a stepping off point for further study of fire.

### **FORS 232 - Forest Insects & Diseases. 3 Credits.**

Offered spring. Identification, significance of and remedies for insect infestations and infectious and non-infectious diseases of forests and forest products.

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### **FORS 240 - Tree Biology. 2 Credits.**

Offered autumn and spring. Suggested coreq., FORS 241N. The physical and biological requirements for the growth and development of trees. Discussions of: identification, classification, range, and economic importance of the major tree species of North America.

### **FORS 241N - Dendrology. 3 Credits.**

Offered autumn and spring. Suggested coreq., FORS 240. Methods and techniques for identifying the major families of North American trees, based on gross morphological and anatomical features. Building and use of identification keys. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **FORS 250 - Introduction to GIS for Forest Management. 3 Credits.**

Offered every term. This course is designed as a practical introduction to the use of Geographic Information Systems (GIS) for storing, retrieving, analyzing and displaying spatial data. It will also cover the history of cartography and the conventions of the modern map-making process. Students need to register for a required lab section. Credit cannot be earned for both FORS 250 and GPHY 284.

### **FORS 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors; new courses or one-time offerings of current topics.

### **FORS 292 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr. Individual research at the undergraduate level.

### **FORS 308 - Fire Ecology Field Studies. 3 Credits.**

This course introduces students to all aspects of forest demography and forest community ecology in the field. Particular attention is given to the agents of woody plant mortality, including beetle gallery identification, pathogenic fungi, density-dependent mortality, fire, and the effects of landscape position. Students learn how data are collected to maximize information used to answer scientific questions, including the relationships between accuracy, precision, uncertainty, and cost (in time and money). Students learn how to measure fuel loading at landscape scales according to federal standards. In addition to specific measurements in ponderosa pine and larch/mixed-conifer forest types, students visit and compare Engelmann spruce/subalpine forests and riparian cottonwood forests. Students will also study forest-river interactions and the modification thereof by fire.

### **FORS 310 - Field Methods in Forest Ecology. 3 Credits.**

This course introduces students to all aspects of forest demography and forest community ecology in the field. Particular attention is given to the agents of woody plant mortality, including beetle gallery identification, pathogenic fungi, spatially explicit density-dependent mortality, fire, and the effects of landscape position. Students learn how data are collected to maximize information used to answer scientific questions, including the relationships between accuracy, precision, uncertainty, and cost (in time and money). Students then collect tree demography data within the Yosemite Forest Dynamics Plot. Students learn how to measure fuel loading at landscape scales according to federal standards. In addition to specific

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measurements in one forest type (white fir/sugar pine), students visit and compare the other principal forest types of the Sierra Nevada and White Mountains (ponderosa pine, red fir, Jeffrey pine, lodgepole pine, whitebark pine, pinyon/juniper, and bristlecone pine).

### **FORS 320 - Forest Environmental Economics. 3 Credits.**

Offered spring. Prereq. M 121 and M 122 or M 151 or M 162 or M 171 or M 172. Economic techniques to support decision making about the allocation of scarce resources in relation to the management of forests for timber and other ecosystem services.

### **FORS 330 - Forest Ecology. 3 Credits.**

Offered autumn. Prereq., BIOO 105N or BIOB 170N or BIOE 172 or BIOB 160N or BIOB 101N ; and either prereq. or coreq. ENSC 245N or NRSM 210N or FORS 241N. Examination of physical and biological factors affecting forest structure, composition, and function, including biodiversity and species interactions, succession, disturbance, and nutrient cycling. Introduces foundational ecological theory and terminology, illustrated with examples from local, regional, and global forest ecosystems.

### **FORS 331 - Wildland Fuel Management. 3 Credits.**

Offered spring. Prereq., FORS 230 or consent of instr. The fire ecology of some western vegetation types is discussed. Elements of the principles of wildland fuel management are presented. Prescribed fire use and mechanical manipulation are matched to historic ecosystem processes. Smoke management considerations and health issues are also presented.

### **FORS 333 - Fire Ecology. 3 Credits.**

Offered autumn. Prereq., one of the following ecology courses (FORS 330 or BIOE 370 or BIOE 342 or NRSM 462), or FORS 230. A detailed analysis of fire ecology in terrestrial ecosystems with a focus on the Rocky Mountains, including fire history, fire effects, landscape patterns, land use legacies, management implications, and current topics. Includes at least one required all-day field trip.

### **FORS 335 - Forest Ecology Lab. 1 Credit.**

Prereq., FORS 130 or FORS 202 and coreq., FORS 330. Field course with overnight camping. Must be able to safely travel off trail on steep, forested terrain. Introduces field techniques for measuring forest ecosystem attributes and illustrates foundational forest ecology theory and concepts with field visits to local and regional forests.

### **FORS 340 - Forest Product Manufacturing. 3 Credits.**

Offered autumn. Survey of the manufacture of wood-based products generated from timber harvest. Laboratory exercises focused on hands-on student learning of product manufacture and testing as well as field trips to several wood products manufacturing facilities.

### **FORS 341 - Timber Harvesting & Roads. 3 Credits.**

Offered spring. An overview of harvesting system capabilities and selection for multiple resource objectives. Fundamentals of forest road management. Best management practices as they apply to forest operations in Montana and the western United States.

### **FORS 342 - Wood Anatomy, Properties, & ID. 3 Credits.**

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Offered spring. Prereq., B100 105N or FORS 241N or consent of instructor. Lecture and laboratory investigation of the structure, identification and physical and mechanical properties of the commercial tree species of North America.

### **FORS 347 - Multiple Resource Silviculture. 3 Credits.**

Offered spring. Prereq., FORS 330 or BIOE 370. Credit not allowed for both FORS 347 and 349. An introduction to the concepts and application of silvicultural techniques to forest ecosystems to meet multiple resource objectives.

### **FORS 349 - Practice of Silviculture. 3 Credits.**

Offered autumn. Prereq., FORS 202 or FORS 302 and FORS 241N and either prereq or coreq FORS 330. Practice of Silviculture is designed primarily for Forestry majors (open to others with appropriate prerequisites), and will consider the conceptual foundations behind various silvicultural practices and techniques, as well as and their application in forest ecosystems to meet multiple resource objectives. The course will cover natural stand dynamics, stand assessment and site classification schemes, even- and uneven-aged silvicultural systems, thinning/stand density concepts, regeneration practices, stand diagnosis and prescription development, vegetative management strategies for diverse objectives, along with quantitative assessment and modeling of alternative prescriptions.

### **FORS 350 - Forestry Apps of GIS. 3 Credits.**

Offered spring. Prereq., FORS 250 or FORS 284 or GPHY 284. Introduction to the basic concepts and techniques of computerized spatial data management and analysis systems and application to natural resource management.

### **FORS 351 - Env Remote Sensing. 3 Credits.**

Offered spring. The theory and application of photo- and electro-optical remote sensing for mapping resources and developing information systems.

### **FORS 391 - Special Topics. 12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FORS 392 - Independent Study. 1-3 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Individual study or research problems.

### **FORS 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **FORS 434 - Advanced Forest Roads. 3 Credits.**

Offered autumn. Prereq., FORS 341. The purpose of this course is to help students understand the principles and skills of forest road design and the concepts of forest transportation planning. The course will cover the basic topics of road location, design, construction, and maintenance and provide students with techniques to



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identify the combination of roads, facilities and transport systems which minimize costs and negative environmental impacts. Level: Undergraduate-Graduate

### **FORS 435 - Advanced Timber Harvesting. 3 Credits.**

Offered autumn. Prereqs., FORS 341. This course covers the fundamentals of logging feasibility and cost analyses of various timber harvesting systems including the characteristics and performance of ground vehicles, cable and aerial systems; cost factors and cost analysis procedures; safety issues; and environmental impacts of harvesting systems. Level: Undergraduate-Graduate

### **FORS 440 - Forest Stand Management. 3 Credits.**

Offered autumn. Prereq., FORS 202 or 302; FORS 341; FORS 347 or 349. The management and manipulation of forest stands to reach multiple objectives, with a focus on the planning of forest operations for a community partner. Level: Undergraduate-Graduate

### **FORS 444 - Applied Methods in Forest Restoration and Utilization. 1-3 Credits.**

(R-9) Offered every term. Meeting all day on Saturdays, and some Sundays, this course involves training students to safely and efficiently identify forest stands to be restored through appropriately-planned management activities including both live and dead timber felling operations, manufacture of sawlogs and pulpwood, proper management of slash and residuals, grapple skidding and the production of lumber using both circular sawmill and bandsaw mill. Level: Undergraduate-Graduate

### **FORS 481 - Forest Planning. 3 Credits.**

Offered spring. Prereq., FORS 320; FORS 347 or FORS 349 or consent of instr. Integrated multiple use planning at the forest-wide level: defining multi-resource management goals, generating management alternatives, projecting outcomes, assessing environmental impacts, and implementing preferred option. Level: Undergraduate-Graduate

### **FORS 491 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **FORS 492 - Independent Study. 1-3 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Individual study or research problems. Level: Undergraduate

### **FORS 495 - Wildland RxFire Practicum. 3 Credits.**

Co-convened with FORS 544. Prereq., fire experience and consent of instructor. An intensive field course providing students with technical training, practical applications, and theoretical foundations in ecological burning for restoration purposes. Class is typically held in southeastern United States. Level: Undergraduate

### **FORS 498 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate-Graduate

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### **FORS 499 - Senior Thesis. 1-3 Credits.**

Offered autumn and spring. Prereq., senior standing and consent of instr. Preparation of a major paper based on study or research in a field selected according to the needs and objectives of the student. Level: Undergraduate

### **FORS 505 - Sampling Methods. 3 Credits.**

Offered spring. Prereq., consent of instr. Fundamentals of statistical sampling emphasizing natural and environmental resource applications. Principles of inferences and alternative estimators are studied in the context of simple random, systematic, unequal probability, stratified, and 3P/Poisson designs. Variable radius plot sampling, line intersect sampling, and other probability proportional to size designs used in forest and ecological inventories are also covered. Level: Graduate

### **FORS 521 - Heur. Opt. for For. Plan.. 3 Credits.**

Offered spring even-numbered years. Prereq. FORS 481 or equiv. and consent of instr. Modern heuristic optimization techniques and their applications to solving spatially explicit forest planning problems. Level: Graduate

### **FORS 535 - Applied Forest Ecology. 3 Credits.**

Prereq., graduate status or consent of instructor. This course covers the use of ecological theory and data in the design of silvicultural treatments to achieve multiple management objectives, with particular emphasis on forest restoration and climate change adaptation. We examine methods of silvicultural design, including use of historical and contemporary reference conditions, and climate adaptation strategies. Analysis exercises use the open source statistical program and language R for data analysis, visualization, and modeling, especially of spatial point pattern data. Introduction to monitoring and adaptive management of silvicultural treatments.

### **FORS 538 - Ecological Statistics. 3 Credits.**

Offered autumn. Prereq., STAT 451 and STAT 452 or equivalent. This is an applied course covering advanced statistical modeling techniques using examples from forestry, ecology, and the environmental sciences. Covers data management, visualization, and scripting with R, an open source data analysis and statistics platform. Explores various parametric and semi-parametric modeling strategies that allow for non-linear response functions and/or non-Gaussian response distributions. Estimation and inference in the context of generalized linear models, generalized additive models, and classification and regression trees are discussed using examples from the scientific literature. Lays the foundation for subsequent graduate-level analytic coursework. Level: Graduate

### **FORS 540 - Disturbance Ecology. 3 Credits.**

Prereq., graduate status or consent of instructor. This course covers foundational disturbance ecological concepts; examines important and influential disturbance ecology theories; and introduces important disturbance agents and processes operating in temperate and boreal forest ecosystems.

### **FORS 544 - Adv. Wildland RXFire Practicum. 3 Credits.**

Co-convened with FORS 495. Prereq. Consent of Instructor. An intensive field course providing students with technical training, practical applications, and theoretical foundations in ecological burning for restoration purposes. Students will practice leadership skills by supervising and training fire personnel in application of

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prescribed fire. Class typically held in southeastern United States. Credit is not allowed for both FORS 495 Wildland Prescribed Fire Practicum and FORS 544 Prescribed Fire Practicum. Level: Graduate

### **FORS 545 - Silviculture Research. 1 Credit.**

(R-6) Offered intermittently. Prereq., consent of instr.; prereq. or coreq., FOR 347 or equiv. Reading and discussion of scientific literature related to silvicultural practice and science. Different topic each semester. Students become familiar with silviculture literature, develop skills for scrutinizing scientific literature, and examine silvicultural topics in detail. Level: Graduate

### **FORS 551 - Digital Image Processing. 4 Credits.**

Offered intermittently. Prereq., FORS 351 or consent of instr. Fundamentals of electro-optical digital remote sensors, data compilation, preprocessing, and pattern recognition. Level: Graduate

### **FORS 558 - Landscape Ecology. 3 Credits.**

Offered Spring semester even years. Prereq., FORS 538 or equivalent. The purpose of this course is to provide students with an introduction to the discipline of landscape ecology with a focus on applications within ecology and natural resource management. In addition to studying the fundamentals of landscape ecology through reading primary literature, students will gain exposure to a range of tools used in the analysis of geo-spatial data including raster analysis, environmental remote sensing, state transition models and species distribution models. Another objective is to engage students in student-directed learning within an inter-disciplinary environment to improve and refine students oral and written communication skills. Level: Graduate

### **FORS 594 - Graduate Seminar. 1 Credit.**

(R-12). Offered autumn. Prereq. graduate standing. Presentations by students, faculty, and professionals on issues and topics in their field. Level: Graduate

### **FORS 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **FORS 596 - Independent Study. 1-3 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Individual study or research problems. Level: Graduate

### **FORS 598 - Internship. 1-15 Credits.**

(R-15) Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **FORS 599 - Professional Paper. 1-15 Credits.**

(R-15) Offered autumn and spring. Preparation of Master of Ecosystem Management professional paper. Level: Graduate

### **FORS 697 - Graduate Research. 1-15 Credits.**

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(R-15) Offered every term. Independent graduate research in forest management, wood science, soils, wildlife management, silviculture, recreation and other topic areas. Level: Graduate

### **FORS 699 - Thesis. 1-15 Credits.**

(R-15) Offered every term. Preparation of thesis/dissertation. Level: Graduate

## French (FRCH)

### **FRCH 101 - Elementary French I. 4 Credits.**

Offered autumn. Active skills: listening, speaking, reading and writing plus basic cultural analysis.

### **FRCH 102 - Elementary French II. 4 Credits.**

Prereq., FRCH 101 or requisite placement exam score. Offered spring. Continuation of 101.

Gen Ed Attributes: Foreign Language Requirement

### **FRCH 191 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FRCH 201 - Intermediate French I. 4 Credits.**

Offered autumn. Prereq., FRCH 102 or requisite placement exam score. Expansion of active skills: listening, speaking, reading, writing plus further cultural analysis.

Gen Ed Attributes: Foreign Language Requirement

### **FRCH 202 - Intermediate French II. 4 Credits.**

Offered spring. Continuation of 201 or requisite placement exam score, FRCH 201 or equiv.

Gen Ed Attributes: Foreign Language Requirement

### **FRCH 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FRCH 292 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **FRCH 294 - Seminar/Workshop. 1-6 Credits.**

(R-6) Offered intermittently. University omnibus option for independent work. See index.

### **FRCH 300 - Intro to Literature in French. 3 Credits.**

Offered intermittently. Prereq., FRCH 201, or consent of instruct. Introduction to literature on special current topics with a focus on reading and written skills in French.

### **FRCH 301 - Advanced Grammar/Oral and Written Expression. 3 Credits.**

Prereq., FRCH 202 or equivalent. Advanced grammar review including literary tenses; developmental and written skills in French.

Gen Ed Attributes: Foreign Language Requirement

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### **FRCH 302 - Advanced French Grammar and Oral Expression II. 3 Credits.**

Prereq., FRCH 202 or equivalent. Advanced grammar review including literary tenses; developmental and written skills in French.

### **FRCH 310 - French Literature and Culture: Middle Ages and Renaissance. 3 Credits.**

Offered autumn. Prereq., FRCH 202 or equiv. and coreq., FRCH 301. French literature of the Middle Ages and Renaissance with a focus on cultural identity.

### **FRCH 311 - French Literature and Culture: 17th 18th Centuries. 3 Credits.**

Offered spring. French literature of the 17th and 18th centuries within its cultural context.

### **FRCH 312 - French Literature Culture: Long 19th Century. 3 Credits.**

Offered autumn. Prereq., FRCH 301 or consent of instr. French literature from the French Revolution to the First World War within its cultural context.

### **FRCH 313 - Literature and Culture III: French and Francophone Literatures and Cultures of the 20th Century. 3 Credits.**

Offered spring. Prereq. FRCH 301 or consent of instr. Survey of literature and culture of 20th Century France and Francophone countries, with a focus on the significance of plural cultural identities.

### **FRCH 338 - The French Cinema. 3 Credits.**

(R?6) Offered intermittently. An historical, aesthetic, and critical survey of the French cinema, from its beginnings in 1895 through the contemporary cinema (Muet, classical, Realism, Nouvelle Vogue, etc.) With an introduction to contemporary film criticism. Students taking the course for French credits are required to do research, reading, and writing in the French language.

### **FRCH 339 - Survey of African Cinema. 3 Credits.**

Offered intermittently. A diachronic survey of African cinema accompanied by interpretation and evaluation of textual dimensions of films through filmic critical theory.

### **FRCH 350 - French Civilization & Culture. 3 Credits.**

(R-6) Offered spring. Prereq., FRCH 301 or consent of instr. Chronological/topical study of French culture.

### **FRCH 391 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FRCH 392 - Independent Study. 1-3 Credits.**

(R?3) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **FRCH 394 - Seminar/Workshop. 1-12 Credits.**

### **FRCH 420 - Studies in French Prose. 3 Credits.**

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Offered intermittently. Prereq., FRCH 301 and one of 310, 311, 312, or 313 or consent of instructor. Evolution of textuality from the Renaissance to the 20th century: the novel.

### **FRCH 421 - Advanced Stylistics & Oral Arguments. 3 Credits.**

Prereq., FRCH 301 and one of FRCH 310, 311, 312 or 313 or consent of instructor. Intensive analysis of usage and style in written and oral argumentation at various linguistic levels.

### **FRCH 430 - Studies in French Drama. 3 Credits.**

Offered intermittently. Prereq., FRCH 301 and one of FRCH 310, 311, 312 or 313 or consent of instructor. Evolution of theatre from the Renaissance to the 20th century or performance of a French play in French.

### **FRCH 440 - Studies in French Poetry. 3 Credits.**

Offered intermittently. Prereq., FRCH 301 and one of FRCH 310, 311, 312 or 313 or consent of instructor. Evolution of textuality from the Renaissance to the 20th century: poetry and essays.

### **FRCH 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **FRCH 492 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **FRCH 494 - Seminar/Workshop. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., FRCH 301 and one of FRCH 310, 311, 312 or 313 or consent of instructor. Studies in major authors, periods, genres, and/or cultural studies.

### **FRCH 594 - Graduate Seminar. 3 Credits.**

(R?6) Offered autumn and spring. Prereq., graduate standing. A review and discussion of current research. Topics vary. Level: Graduate

### **FRCH 595 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **FRCH 596 - Independent Study. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **FRCH 599 - Professional Paper. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **FRCH 699 - Thesis. 1-9 Credits.**

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(R?9) Offered intermittently. Prereq., graduate standing. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate



## General engineering Core (EGEN)

### **EGEN 101 - Intro to Engineering Calculation & Problem Solving. 3 Credits.**

Offered autumn. Prereq. or coreq., M 151, or M 121 and M 122, or M 171 or M 172 or ALEX score of 5, or M03-Maplesoft Calculus score  $\geq 15$ . An introduction to engineering calculations, problem solving, and design. Students are taught to solve and present engineering problems on computers using spreadsheet and graphic software (AutoCAD). In addition, there will be discussions on engineering failures and engineering ethics.

### **EGEN 201 - Engineering Statics. 3 Credits.**

Prereq., PHSX 215N, M 171; prereq., or coreq., M 172. Equilibrium of particles and rigid bodies; addition and resolution of forces, vector algebra, moments and couples, resultants and static equilibrium, equivalent force systems, centroids, center of gravity, free body method of analysis, two and three dimensional equilibrium, trusses, frames, friction, and method of virtual work.

### **EGEN 202 - Engineering Mechanics - Dynamics. 3 Credits.**

Prereq., EGEN 201, M 172. Particle and rigid body kinematics and kinetics; rectilinear, curvilinear, and relative motion, equations of motion, work and energy, impulse and momentum, systems of particles, rotation, rotating axes, rigid body analysis, angular momentum, vibration, and time response.

### **EGEN 335 - Fluid Mechanics. 3 Credits.**

Prereq., EGEN 201, M 311. An introduction to the basic concepts of fluid mechanics including the fundamental properties of fluids, fluid statics, kinematics of fluid motion, and similitude. The conservation of mass, energy, and momentum are introduced with applications to compressible and incompressible fluids. Laminar and turbulent boundary layers are introduced.

## Geography (GPHY)

### **GPHY 111N - Intro to Physical Geography. 3 Credits.**

Offered autumn and spring. Introduction to the earth's major natural environmental systems, their spatial distribution and interrelationships, including weather and climate, vegetation and ecosystems, soils, landforms, and earth-surface processes.

Gen Ed Attributes: Natural Science Course (N)

### **GPHY 112N - Intro to Physical Geography Lab. 1 Credit.**

Offered autumn and spring. Prereq. or coreq., GPHY 111N. Introduction to concepts and techniques needed to understand and analyze the information contained in various types of maps, graphs, aerial photos, imagery, and other graphics and geographic data sets. This is prerequisite to GPHY 385. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **GPHY 121S - Human Geography. 3 Credits.**

Offered autumn and spring. Introduction to Human Geography focuses upon the linkages between geography and society including analysis of regions, ethnic groups, urban landscapes, migration and population change, geopolitics, economics, and cultural differences.

Gen Ed Attributes: Social Sciences Course (S), Cultural Intl Diversity (X)

### **GPHY 141S - Geography of World Regions. 3 Credits.**

Offered autumn and/or spring. An overall view of how the lands and peoples of the world are organized into coherent geographical regions, how landscapes differ from region to region, and how the people differ in terms of their traits, beliefs, ways of life, and economic livelihood.

Gen Ed Attributes: Social Sciences Course (S), Cultural Intl Diversity (X)

### **GPHY 144 - Glacier National Park in Winter. 3 Credits.**

Consent of Instructor. A field-based course offered during winter session in the winter splendor of the North Fork of the Flathead River and Glacier National Park. Topics addressed include physical geography, geology, winter ecology, national park management, environmental history, and the changing economy of the region.

### **GPHY 241 - Montana. 3 Credits.**

Offered autumn. The physical, cultural, economic, political, and historical geography of the state including Montana's mountains and the prairies.

### **GPHY 243 - Africa. 3 Credits.**

Offered intermittently. A survey of the biophysical and cultural geography of Sub-Saharan Africa. Emphasis is on the region's cultural-historical development and current ecological, demographic, and economic patterns.

## University Of Montana

### **GPHY 245 - The Middle East. 3 Credits.**

Offered intermittently. A survey of the biophysical and cultural geography of Southwest Asia and North Africa. Emphasis on environmental change; prehistory; patterns of cultural and historical change; issues of socio-economic, religious, and political diversity; and the broader political significance of the region.

### **GPHY 284 - Intro to GIS and Cartography. 3.000 Credits.**

Offered every term. This course is designed as a practical introduction to the use of Geographic Information Systems (GIS) for storing, retrieving, analyzing and displaying spatial data. It will also cover the history of cartography and the conventions of the modern map-making process. Students need to register for a required lab section. Credit cannot be earned for both FORS 250 and GPHY 284.

### **GPHY 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GPHY 295 - Mountain Field Studies. 1 Credit.**

Offered autumn and spring as a series of one-credit courses, maximum of three-credits per semester. Field studies of Montana's Rocky Mountain Front, Crown of the Continent, or Yellowstone. Students prepare to conduct field work, spend time in the field observing wildlife, physical landscapes and cultural aspects of these landscapes, and follow up their observations in written reports.

### **GPHY 311N - Biogeography. 3 Credits.**

Offered intermittently. Changing patterns of plant and animal distributions in space and time. Combination of historical and ecological approaches to biological species and communities. Study of external causes of plant and animal distributions, especially climatic change and human impacts.

Gen Ed Attributes: Natural Science Course (N)

### **GPHY 314 - Global Mountain Environments. 3 Credits.**

Offered autumn odd-numbered years. The study of mountain environments and their physical processes around the globe: Andes, Appalachians, East African Mountains, European Alps, Hindu Kush-Himalaya-Karakoram, Pamir, Rocky Mountains, Southern Alps of New Zealand, Tien Shan, and others. Topics include mountain building, alpine glaciers, mountain geomorphology and climatology, mountain watersheds, mountain biogeography, and mountain hazards such as earthquakes and mass movements.

### **GPHY 317 - Geomorphology. 3 Credits.**

Offered autumn even-numbered years. Prereq., GPHY 111N or GEO 101N. Important landforms and landscapes, their biophysical processes, and their formative elements.

### **GPHY 323S - Economic Geography of Rural Areas. 3 Credits.**

Offered spring odd-numbered years. Study of the location of economic activities, including agriculture, industry, and services. Focus on the changing nature of rural areas.

Gen Ed Attributes: Social Sciences Course (S)

### **GPHY 335 - Water and Sustainability. 3 Credits.**

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Offered autumn. Prereq., WRIT 101 or equivalent or consent of instructor. Geographical perspective on water resource issues and challenges facing the public, resource managers, and water users in the western United States. Examines concepts, terms, and regulatory environment which provide the foundation for sustainable water management and policy.

Gen Ed Attributes: Writing Course-Advanced

### **GPHY 338 - Mountains and Society. 3 Credits.**

Offered spring. Physical and cultural aspects of the mountains of North and South America, Europe, Africa, and Asia. Emphasis on combining the physical landscape with an overview of the indigenous people who inhabit the worlds? heights.

### **GPHY 342 - North America. 3 Credits.**

Offered intermittently. Physiographic regions of North America; highlights of historical geography blended with physical and cultural aspects of the continent. Lesser known places are explored.

### **GPHY 344 - Crown of the Continent. 3 Credits.**

Offered autumn. The study of the geographical setting of the Crown of the Continent of North America, including the richness of physical geography, history, culture, and models of conservation. Examines ongoing research initiatives, impacts of climate change, regional transformations, and the relationship between people and this mountainous environment.

### **GPHY 347 - Regional Geography (Multiple Regions). 3 Credits.**

(R-9) Offered intermittently. Selected regions will be listed as appropriate in each Class Schedule.

### **GPHY 348 - Field Studies in Geography. 3 Credits.**

(R-12) Offered autumn and spring. Through extended backcountry travel, experiential examination of regional landforms, climate, hydrology, soils, and patterns of vegetation and wildlife. Local landscapes, natural-resource endowment, and societies with particular emphasis on human-environmental interaction. Geographical skills and techniques, including map reading and navigational skills. Offered by the Wild Rockies Field Institute as part of a semester-long, 12-credit field experience with corequisite courses in allied fields.

### **GPHY 378 - Preceptorship in Geography. 1-3 Credits.**

(R-6) Offered autumn and spring. Consent of instructor. Assisting a faculty member by tutoring, conducting review sessions, helping students with research projects, and carrying out other class-related responsibilities. Open to juniors and seniors who apply to instructor for consent.

### **GPHY 385 - Field Techniques. 3 Credits.**

Offered autumn and intermittently in spring. Prereq., GPHY 112N or Consent of Instructor. Field techniques used by geographers and planners in making field observations and in collecting data.

### **GPHY 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **GPHY 392 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Consent of Instructor. Independent study in any subfield of geography.

### **GPHY 395 - Field Studies. 1-9 Credits.**

(R-9) Offered fall and/or spring. Field experience in the region. Includes geographically relevant field courses offered as part of Swan Valley Connections' Landscape and Livelihood Field Semester, focusing on natural and human communities and on conservation solutions of the Southwest Crown of the Continent Region: Sustainability and Agriculture (3 cr), and Biogeography of Northwest Montana (4 cr).

### **GPHY 400 - Geography Capstone. 1 Credit.**

Offered autumn. Prereq., Senior standing. Exploration of current research, projects, and programs of geographers and scientists/practitioners in allied disciplines and fields, and preparation of a professional portfolio. Student preparation for post-graduate professional and academic careers is emphasized. Level: Undergraduate

### **GPHY 421 - Sustainable Cities. 3 Credits.**

Offered spring even-numbered years. Prereq., upper-division or graduate standing. A discussion of sustainability efforts in cities around the world. Topics include, for example, urban sprawl and smart growth, alternative energy, public transportation, integrated waste management, integrated water management, green architecture, and urban agriculture. Level: Undergraduate-Graduate

### **GPHY 433 - Community Resilience. 3 Credits.**

Offered most springs. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Examines human-environment relations and interactions. Topics include: human geographic perspectives on landscape, cultural ecology, political ecology, community resilience in relation to complex adaptive systems, and planning applications. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **GPHY 434 - Food and Famine. 3 Credits.**

Offered intermittently. Exploration of the production, distribution, and consumption of food; the causes and consequences of hunger; and measures that might be taken to relieve hunger. Level: Undergraduate-Graduate

### **GPHY 438 - Mountain Field Study. 3 Credits.**

(R-6) Upper-division or graduate standing and consent of instructor. Examination of aspects of the study of mountain geography through a two-week field course based in a mountainous country and/or region. Possible areas of focus include, but are not limited to, the Northern Rocky Mountains, the Alps, the Himalaya, and the Andes. Level: Undergraduate-Graduate

### **GPHY 444 - High Asia. 3 Credits.**

Offered intermittently. A study of the geography and mountain-society interactions in High Asia. The course includes attention to the theory and methodology of mountain geography, with attention to physical and human systems and their interaction. Level: Undergraduate-Graduate

### **GPHY 465 - Planning Principles & Processes. 3 Credits.**

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Offered autumn even-numbered years. Prereq., upper-division or graduate standing. Surveys planning principles, practices and issues in urban and rural environments. Attention is devoted to Montana, state planning programs in the United States., and federal programs and policies that influence land-use planning. Emphasizes skills and techniques used in plan development and implementation. Level: Undergraduate-Graduate

### **GPHY 466 - Environmental Planning. 3 Credits.**

Offered autumn odd-numbered years. Introduction to practice of environmental planning which includes elements of physical planning, planning design at the landscape scale, and conservation planning. Includes field visits and project-based work. Level: Undergraduate-Graduate

### **GPHY 468 - Community & Regional Analysis. 3 Credits.**

Offered autumn. Coreq., GPHY 469. Socio-demographic analysis of communities and regions: population, employment, and spatial interaction. Hands-on course designed for future planners, GIS analysts, and others interested in socio-demographic change. To succeed in this course students should have comfort with basic algebra. Level: Undergraduate-Graduate

### **GPHY 469 - Planning & Analysis Laboratory. 1 Credit.**

Offered autumn. Coreq., GPHY 468. Laboratory to accompany GPHY 468. Level: Undergraduate-Graduate

### **GPHY 474 - UAV Remote Sensing for Field Ecology. 3 Credits.**

Offered summer only at the Flathead Lake Biological Station. Prereq., FORS 250 or GPHY 284. This course will introduce students to field-based methods of close-range remote sensing in freshwater ecosystems. Students will gain knowledge of basic spatial analysis through GIS and remote sensing techniques. Students will learn basic applications of UAVs and Acoustic Doppler Profilers, two remote sensing instruments of fast-growing interest in ecological research and application. Students will learn about essentials to operate UAVs and ADPs, initial post-processing of data products and integrating these data into ecological research and application. Level: Undergraduate-Graduate

### **GPHY 481 - Advanced Cartographic Design. 3 Credits.**

Offered autumn. Prereq., GPHY 284 or FORS 250 or Consent of Instructor. The course concentrates on the presentation of spatial data and the construction of cartographic products that have clear communication and excellent aesthetic design. The class meets the University's service learning course objectives through a semester long project where students consult with a client, design and construct a map, and deliver a final product. Level: Undergraduate-Graduate

### **GPHY 482 - Spatial Analysis & GIS. 3 Credits.**

Offered intermittently. Prereq., GPHY 284 or FORS 250 or consent of instructor. Coreq., GPHY 489. Quantitative analysis of spatial data, including techniques for pattern analysis, classification, and interpolation within a GIS environment. Level: Undergraduate-Graduate

### **GPHY 485 - Internet GIS. 3 Credits.**

Offered intermittently. Prereq., GPHY 284 or FORS 250 or Consent of Instructor. Principles and techniques for distributing GIS and mapping applications through the Internet. Students need to register for a required linked lab section. Level: Undergraduate-Graduate

## University Of Montana

### **GPHY 486 - Transport, Planning & GIS. 2,3 Credits.**

Offered intermittently during winter session (2 credits) or spring semester (3 credits.) Coreq., GPHY 489. A project-oriented course focusing on patterns and trends in urban passenger transportation, principles of transport planning, and modeling in GIS-T. To succeed in this course students should have comfort with basic algebra and statistics. Level: Undergraduate-Graduate

### **GPHY 487 - Remote Sensing/Raster GIS. 3 Credits.**

Offered autumn. Prereq. or coreq., GPHY 284 or FORS 250 or Consent of Instructor. Coreq., GPHY 489. Basic principles of remote sensing and analyzing images within a raster GIS. Review current data sources. Level: Undergraduate-Graduate

### **GPHY 488 - Applications of GIS. 3.000 Credits.**

Offered spring. Prereq., GPHY 284 or GPHY 381 or FORS 250 or Consent of Instructor. Application of GIS for managing natural and cultural resources. Covers choropleth maps, dot maps, proportional figure maps, isarithmic maps, and others. Includes computer mapping and GIS exercises. Students need to register for a required linked lab section. Level: Undergraduate-Graduate

### **GPHY 489 - Cartography/GIS Laboratory. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., or coreq., GPHY 482, 486 or 487. Lab to accompany cartography and GIS courses. Level: Undergraduate-Graduate

### **GPHY 491 - Special Topics. 9.000 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **GPHY 492 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Consent of instructor. Independent study in any subfield of geography. Level: Undergraduate-Graduate

### **GPHY 497 - Workshop in Teaching Geography. 2-3 Credits.**

Offered intermittently. Concepts and techniques in geography, with emphasis on their use in teaching geography in Montana schools. Students are required to prepare and present a teaching unit project. Designed for pre-service or in-service teachers. Level: Undergraduate-Graduate

### **GPHY 498 - Internship. 1-6 Credits.**

Offered every term. Consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements within governmental agencies or the business community. A maximum of 6 credits of Internship may count toward graduation. Level: Undergraduate-Graduate

### **GPHY 499 - Senior Thesis. 3 Credits.**

(R-6) Offered autumn and spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course and senior standing and consent of instructor. Independent research project in any geographical topic supervised by a faculty member, and leading to completion of the baccalaureate degree. Level: Undergraduate-Graduate

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Gen Ed Attributes: Writing Course-Advanced

### **GPHY 500 - Geography Graduate Colloquium. 1 Credit.**

(R-3) Offered autumn. Presentation of faculty and student research. Guest lecturers. Graded pass/not pass only. Enrollment required every autumn graduate students are in residence. Level: Graduate

### **GPHY 504 - Research Design in the Geographical Sciences I. 1 Credit.**

Offered once a year. To be taken during first semester of graduate studies and in sequence with GPHY 505. Understanding of diverse research approaches in the geographical sciences and development of thesis project. To be taken during first year of graduate studies. Level: Graduate

### **GPHY 505 - Research Design in Geographical Sciences II. 2 Credits.**

Offered once a year. Prereq., or corereq GPHY 504. Preparation of a thesis proposal: research design, data collection, analysis, interpretation, and presentation. Recommended to be taken during the first year of graduate studies. Level: Graduate

### **GPHY 520 - Seminar Geographical Thought. 3 Credits.**

Offered once a year. Geographical ideas, concepts, approaches, and techniques from ancient to modern times. Recommended to be taken during first year of graduate studies. Level: Graduate

### **GPHY 525 - Advanced Physical Geography. 3 Credits.**

(R-9) Offered intermittently. Advanced topics in climate and global change, paleo-environments and biogeography, landform analysis, soils, and other selected topics. Topic titles will appear in the Class Schedule. Level: Graduate

### **GPHY 550 - Seminar in Geography. 3 Credits.**

(R-9) Offered intermittently. Seminar topics in geography and society, human-environmental interaction, physical geography, regional geography, or geographical techniques. Level: Graduate

### **GPHY 560 - Seminar in Planning. 3 Credits.**

Offered spring odd-numbered years. A critical analysis of land planning history, theory, approaches, and practice. Emphasis is on the United States and England. Level: Graduate

### **GPHY 561 - Land Use Planning Law. 3 Credits.**

Offered autumn. Same as ENST 561 and LAW 687. Basic overview of the law of land-use planning including, background in the traditional governmental regulatory, proprietary, and fiscal land use tools. Examination of modern techniques for land-use planning; consideration of constitutional limits of the authority of state and local governments. Focus on skills in interpreting, drafting, and applying state legislation and local ordinances. Level: Graduate

### **GPHY 562 - Land Use Planning Clinic. 1-6 Credits.**

(R-6) Offered every term. Prereq. or coreq., GPHY 561. Same as ENST 562. Students assist local communities in long-range planning efforts and development of growth management plans as required by Montana law; ordinance drafting, development proposals, and land use issues. Level: Graduate



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### **GPHY 564 - Planning Design. 3 Credits.**

Offered spring even-numbered years. Prereq., graduate standing or Consent of Instructor. Analysis of land-use problems and design. Level: Graduate

### **GPHY 578 - Preceptorship in Geography. 1-3 Credits.**

(R-6) Offered autumn and spring. Graduate standing and Consent of Instructor. Assisting a faculty member by tutoring, helping students with research projects, and carrying out other class-related activities. Level: Graduate

### **GPHY 580 - Seminar GIS & Cartography. 3 Credits.**

(R-9) Offered every two years. Seminar topics in cartography and GIS. Applications to advanced studies in human and physical geography. Level: Graduate

### **GPHY 587 - Image Analysis & Modeling. 3 Credits.**

Offered every two years. Prereq., GPHY 487 or FORS 351 or Consent of instructor; coreq., GPHY 589. Advanced topics in image analysis (e.g. hyperspectral images and pattern-recognition-based classification) and foundations of simple raster-based models. Level: Graduate

### **GPHY 588 - Spatial Analysis and Modeling. 3 Credits.**

Offered autumn. Coreq., GPHY 589. Theoretical/conceptual and practical aspects of entity-based GIS modeling and spatial analysis. Point pattern analysis (i.e. cluster detection, density analysis, kriging), network analysis (i.e. network construction, network-based spatial statistics, accessibility modeling), and areal pattern analysis (i.e. spatial autocorrelative pattern, spatial regression modeling). Applications in urban and environmental planning, transportation, natural resource management, ecology, health, criminology, engineering, and business. Level: Graduate

### **GPHY 589 - Cartography/GIS Laboratory. 1 Credit.**

(R-4) Offered autumn and spring. Laboratory to accompany GPHY 587 or 588. Level: Graduate

### **GPHY 595 - Special Topics. 1-8 Credits.**

(R-9) Offered intermittently. Prereq., Consent of Instructor. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **GPHY 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Graduate standing and consent of instructor. Independent research in geography or planning. Level: Graduate

### **GPHY 597 - Professional Paper. 1-6 Credits.**

(R-6) Offered autumn and spring. Graduate standing in Geography and Consent of Advisor. Level: Graduate

### **GPHY 598 - Internship. 1-9 Credits.**

(R-9) Offered every term. Graduate standing and consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **GPHY 599 - Thesis. 1-6 Credits.**

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Offered every term. Graduate standing in Geography and Consent of Advisor. Level: Graduate

## Geoscience (GEO)

### **GEO 101N - Introduction to Physical Geology. 3 Credits.**

Offered autumn and spring. General geology including the work of wind, flowing water, glacial ice, gravity, earthquakes, volcanoes and plate tectonics in shaping the earth.

Gen Ed Attributes: Natural Science Course (N)

### **GEO 102N - Introduction to Physical Geology Lab. 1 Credit.**

Offered autumn and spring. Prereq. or coreq., GEO 101N. A series of laboratory and field experiences designed around basic geologic processes and materials. Familiarization with common minerals, rocks, land forms, and structures. Intended to provide laboratory experience primarily with GEO 101N, but can be taken with or following any of the other freshman GEO courses listed above. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **GEO 103N - Introduction to Environmental Geology. 3 Credits.**

Offered autumn and spring. General principles of environmental geology, including the spatial and temporal frameworks involved, Earth's materials (minerals, rocks, water, air), natural hazards, water and air pollution, energy, water, and soil resources, flooding, coastal erosion, and climate.

Gen Ed Attributes: Natural Science Course (N)

### **GEO 104N - Introduction to Environmental Geology Laboratory. 1 Credit.**

Offered autumn and spring. Prereq. or coreq., GEO 103N. A series of laboratory exercises designed around the investigation of environmental geology problems, including natural hazards, water and air pollution, energy, water, and soil resources, flooding, coastal erosion, and climate. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **GEO 105N - Oceanography. 3 Credits.**

Offered spring. The ocean covers 70% of the globe, and yet vast regions remain unexplored. Interactions between the atmosphere and the sea moderate and control our climate. Nearly 40% of the world's population lives within 100 kilometers of the coast. The oceans are geographically, environmentally, culturally, and economically critical to society. This course introduces oceanography, including the origin of water and ocean basins; marine resources; atmospheric circulation; air-sea interaction; ocean-climate feedback; currents, tides, and coastal processes; marine ecology; and use and misuse of the oceans.

Gen Ed Attributes: Natural Science Course (N)

### **GEO 107N - Natural Disasters. 3 Credits.**

Offered intermittently. This course introduces the scientific context and latest research on natural hazards and disasters, including storms, flood, drought, mass wasting (landslides and avalanches), earthquakes and tsunamis, volcanic eruptions, and wildfires.

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Gen Ed Attributes: Natural Science Course (N)

### **GEO 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GEO 191N - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GEO 201 - Geologic Evolution of North America. 4 Credits.**

Offered autumn and spring. Prereq., GEO101N, GEO 103N, GEO 105N or GEO 107N. Presents scientific evidence and interpretations as to Earth's evolution and history as preserved in the North American rock record, including the development of the oceans, atmosphere, and climate and biota. Traces the geologic history of the North American continent through time.

### **GEO 202 - The Water Planet. 4 Credits.**

Offered spring. Prereq., GEO 101N or GEO 103N or GEO 105N or GEO 107N and GEO 102N or GEO 104N. The Water Planet will introduce students to the study of the hydrologic cycle and associated earth-surface processes. The course will describe the mechanisms that control the movement of water and the influence of water fluxes on landscapes, ecosystems, and humans.

### **GEO 224N - Gen Science: Physics & Geoscience. 5 Credits.**

Offered autumn. Prereq., M 095 or ALEKS placement  $\geq 4$  or M02-Maplesoft Algebra score  $\geq 12$ . Integrated lectures, discussions, laboratory exercises, and demonstrations on topics in chemical and physical science for prospective elementary school teachers and the non-scientist. A two-hour laboratory session is required each week.

Gen Ed Attributes: Natural Science Lab Course (N)

### **GEO 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GEO 302 - Mineralogy and Optical Mineralogy. 4 Credits.**

Offered autumn. Prereq., GEO 201 and either CHMY 121N or CHMY 141N. Identification, properties, occurrence, and associations of the rock-forming minerals; introduction to crystallography (crystal classes, lattice types, and external morphology) and crystal chemistry (bonding and crystal structure types); analytical techniques including mineral optics, x-ray, and SEM analysis. \$50.00 field trip and lab fee.

### **GEO 304E - Science and Society. 3 Credits.**

Offered autumn. Role of scientific knowledge in human societies from the pre-Classical to the present. Discussion of tools for integrating science into ethical, political, and social decisions, including analyses of modern case studies from physical sciences.

Gen Ed Attributes: Ethical & Human Values Course

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### **GEO 305 - Igneous & Metamorph Petrology. 4 Credits.**

Offered spring. Prereq., GEO 302. Characteristics, phase relations, and origin of igneous and metamorphic rocks. Classification and interpretation of igneous and metamorphic rocks in hand specimen and thin section. Plate tectonic settings of magmatism and metamorphism.

### **GEO 309 - Sedimentation/Stratigraphy. 4 Credits.**

Offered spring. Prereq. GEO 201, 302. Origins of sediments and sedimentary rocks; climate, weathering, and weathering products; transport, deposition, and depositional environments of sediments; concepts and methods of stratigraphy including correlation of sedimentary rocks and an introduction to basin analysis.

### **GEO 315 - Structural Geology. 4 Credits.**

Offered autumn. Prereq., GEO 201, 302. Structures of deformed rocks; mechanical principles; graphical interpretation of structural problems, tectonic principles.

### **GEO 318 - Earth's Changing Climate. 3 Credits.**

Offered autumn and/or summer. Prereq., junior standing and M 151 preferred. The future of our climate from the perspective of climate system dynamics. The course has three five-week modules. The first covers the processes and time scales governing Earth's heat balance, the basic rules of changing climate. The second module explores climate variability stemming from internal dynamics of the climate system. The final module examines the grand challenge in climate science: constraining projections of future change with regards to feedbacks and uncertainties in climate system processes. Emerging research is highlighted throughout the course on unsettled scientific problems in climate science and the approaches taken by scientists to solve them.

### **GEO 319 - Surface Processes. 3 Credits.**

Offered spring. Prereq. GEO 101N/GEO 102N or GEO 103N/GEO 104N, M 122 or M 151. Study of the earth's surface and near surface using the laws and principles of physics. Mechanisms underlying the processes that shape the earth's surface and drive its evolution, including climate, hydrology, geomorphology, and geochemistry.

### **GEO 320 - Global Water. 4 Credits.**

Offered autumn. Prereq., CHMY 121N or CHMY 141N/CHMY 142N, WRIT 101 or equivalent, and one intermediate writing course. Water is necessary for life. Without it, life as we know it cannot exist. This course discusses the chemistry of water as it moves through the hydrological cycle. We discuss how water chemistry evolves through atmospheric water, rain water, ground water, surface water, and sea water. Students will have an understanding of the chemical attributes of water in major water reservoirs. The course is evaluated based on discussions, formal and informal writing assignments and a short laboratory experiment. There is a field trip associated with this course. Students will use excel to solve problems and will learn citation conventions relevant for scientific writing.

Gen Ed Attributes: Writing Course-Advanced

### **GEO 327 - Geochemistry. 3 Credits.**

Offered alternate years. Prereq., CHMY 121N or CHMY 141N/ CHMY 142N, M 171/M 172, and GEO 101N/GEO 102N or GEO 103N/GEO 104N, or consent of instructor. The chemical properties of elements control their geological distribution and underlie the basic physical properties of rocks. An understanding of

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geochemistry will help students understand water chemistry, sediment geochemistry, and igneous petrology. The course covers chemical principles applied to geologic materials and processes, including the origin and chemical composition of earth, atmosphere, and hydrosphere. Principles of stable and radiogenic isotope geochemistry are discussed. Students will use excel to solve problems. Class discussions, problems sets, written assignments, and exams are used to assess student performance.

### **GEO 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GEO 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Specific topics of particular interest to individual students.

### **GEO 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., 12 credits in geosciences. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. No more than 3 credits of GEO 398 may be applied to the geosciences minor. A maximum of 6 credits of Internship may count toward graduation.

### **GEO 409 - Careers in Geosciences. 1 Credit.**

Geoscience graduates have a rich portfolio of career options. This course explores the spectrum of career available to Geoscience students and the tools to ensure a successful career. Invited speakers, mostly alumni of the Geosciences program at UM, describe their career, the skills required by their profession, and provide advice on how to maximize education for success in their field. Speakers are chosen to represent the broad spectrum of career paths and employer opportunities in the Geosciences. Level: Undergraduate-Graduate

### **GEO 420 - Hydrogeology. 4 Credits.**

Offered spring. Prereq., GEO 101N-GEO 102N or GEO 103N-GEO 104N; PHSX 205N/PHSX 206N or PHSX 215N/PHSX 216N ; M 171 strongly recommended or consent of instr. Occurrence, movement, quality, and methods of quantification of groundwater. Geological framework and physics of groundwater flow. Supply, contamination, and management problems.

### **GEO 421 - Hydrology. 3 Credits.**

Offered autumn. Prereq. one semester college calculus and physics or consent of instructor. Introduction to the physical mechanisms that drive the water cycle at different scales. The course covers heat, momentum and mass transfer and storage mechanisms in turbulent systems and their role in the global and local climates. At the local scale, the equations that govern surface and subsurface water flows are studied. Along with the overarching goals, students will improve their quantitative skills, will gain experience accessing and reading the professional literature and will improve their capabilities to acquire knowledge independently.

### **GEO 433 - Global Tectonics. 3 Credits.**

Offered autumn. Prereq., GEO 315 and M 171. Geodynamics and tectonics of the Earth and other planets. Course material includes methods of observing tectonic processes and tectonic phenomena, both at the surface and in the deep earth, over a wide range of time scales. Level: Undergraduate-Graduate

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### **GEO 439 - Geophysics. 3 Credits.**

Prereqs., GEO 101N/ GEO 102N or GEO 103N/GEO 104N, PHSX 207N or PHSX 217N, and M 171, or consent of instructor. We will explore a variety of fundamental topics in geophysics, including Earth formation, Earth structure, plate tectonics, gravity, seismology, heat flow and magnetism. The course will also cover modern geophysical surveying methods, including reflection seismology, refraction seismology, gravity surveying, and magnetic surveying.

### **GEO 443 - Principles of Sedimentary Petrology. 4 Credits.**

Offered autumn. Prereq., GEO 302 or graduate standing. Field, hand specimen and thin section petrology of siliciclastic and carbonate rocks, emphasis on tectonic and diagenetic interpretation of siliciclastic rock and environments of deposition and diagenesis of carbonate rocks.

### **GEO 460 - Process Geomorphology. 4 Credits.**

Offered autumn. Prereq., GEO 202, M 171, PHSX 205N or PHSX 215N, or consent of instructor. Quantitative examination of landforms, runoff generation, weathering, mechanics of soil erosion by water and wind, mass wasting, glacial processes and hillslope evolution. Level: Undergraduate-Graduate

### **GEO 482 - Global Change. 3 Credits.**

Offered Spring. Same as CCS 482. Prereq., upper division/higher standing in Geosciences or consent of instructor. Lectures, readings, discussions and practicum on the complexity of global climate. Emphasizes the physical, geochemical and geologic processes affecting climate change over geologic and recent time scales.

### **GEO 488 - Snow, Ice and Climate Change. 3 Credits.**

Offered autumn. Prereq., junior standing and M 151 preferred. Frozen water (i.e., glaciers, ice sheets, seasonal snow, and sea ice) is a primary component of Earth's climate system that both drives and responds to climate change. This course examines the role of snow and ice in four pressing issues of climate change: 1) global sea level rise and stability of ice sheets; 2) Arctic amplification of climate change and sea ice processes; 3) climate system feedbacks revealed by ice cores; and, 4) water supply and mountain snowpack dynamics. Level: Undergraduate-Graduate

### **GEO 491 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

### **GEO 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Specific topics of particular interest to individual students.

### **GEO 494 - Senior Geology Seminar. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., upper?division standing in geosciences or consent of instr. Independent study of various topics under the direction of a faculty member.

### **GEO 498 - Internship. 1-4 Credits.**

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Offered every term. Prereq., 12 credits in geosciences. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. No more than 3 credits of GEOS 398 may be applied to the geosciences minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **GEO 499 - Senior Thesis /Capstone. 3-10 Credits.**

(R-10) Offered every term. Prereq., 18 credits in geosciences, WRIT 101 or equivalent, and one intermediate writing course. Independent research project in any geosciences topic supervised by faculty member, and leading to completion of baccalaureate degree.

Gen Ed Attributes: Writing Course-Advanced

### **GEO 508 - Fundamentals of Academic Research. 3 Credits.**

Offered autumn. Prereq., graduate standing. An introduction to scientific research including strategies for designing projects, research methods, scientific tools, proposals and publishing, and the culture and trends within the field of geosciences. Intended for first semester graduate students in geosciences. Level: Graduate.

### **GEO 518 - Research Workshop. 2 Credits.**

This course includes group discussion, analysis, and troubleshooting of research challenges. Analogous to writers' and artists' workshops where constructive critiques are used to refine and advance creative material, this workshop will assist students in addressing research challenges through group collaboration and guided discussion of relevant methods and approaches. Level: Graduate

### **GEO 528 - Sedimentary Basin Analysis. 4 Credits.**

Offered intermittently. Influence of allocyclic processes (tectonism, climate, eustasy, etc.) in shaping the evolution of sedimentary basins. Emphasis on integration and synthesis of tools of sedimentary basins analysis, including the study of depositional systems, provenance, paleocurrents, subsidence, sequence stratigraphy, and well logs. Level: Graduate

### **GEO 540 - The Food-Energy-Water Nexus. 3 Credits.**

Offered autumn. Same as NRSM 540. Interdisciplinary course examining interactions between food, energy, and water systems and core concepts and tools at the food-energy-water nexus. Perspectives and connections across scales, sectors, and disciplines (including social and biophysical sciences and engineering) are emphasized. Level: Graduate

### **GEO 541 - Food-Energy-Water Nexus Field Lab. 2 Credits.**

(R-4) Offered spring. Same as NRSM 541. Field-based course connecting theory and practice by examining food-energy-water case studies, conducting interdisciplinary synthesis, and communicating with diverse stakeholders. Combines intermittent in-class meetings and a week-long field trip to regional sites to examine food-energy-water issues on-the-ground and to meet with and learn from producers, managers, policy-makers, and tribal members.

### **GEO 542 - Food-Energy-Water Seminar. 1 Credit.**



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(R-4) Offered autumn and spring. Same as NRSM 542. Autumn seminars will focus on building interdisciplinary knowledge of the food-energy-water nexus through presentations from guest speakers, readings, and domestic and international case studies. Spring seminars will focus on building skills for multiple career paths through presentations and guest lectures.

### **GEO 546 - Seismology and Geodesy. 3 Credits.**

Offered Spring. Prereq., Graduate standing or consent of instructor. We will explore modern topics in geophysics, with a focus on seismology and geodesy. Advanced topics may vary with each offering, but will generally include selections from continuum mechanics, inverse theory, seismic wave propagation, earthquake location, tidal analysis and prediction, GNSS theory and analysis, spheroidal Earth deformation, and surface mass loading. Students will have the opportunity to engage directly with real seismic and geodetic datasets using computational tools, as well as to investigate problems of personal interest through individual research projects. Level: Graduate

### **GEO 548 - Topics in Cryosphere. 3 Credits.**

(R-6) M.S., (R-12) Ph.D.) Prereq., graduate standing or consent of instructor. Readings, discussions, lectures, and field experiments on various topics related to snow, ice, and climate processes. Recent topics: meltwater infiltration in snow, glacier hydrology, climate cycles, ice, and sea level rise. Level: Graduate

### **GEO 560 - Fluvial Geomorphology. 3 Credits.**

Offered spring. Prereq., graduate standing or consent of instructor. Application of fluid mechanics to sediment transport and development of river morphology. Form and process in river meanders, the pool? riffle sequence, aggradation, grade, and baselevel. Level: Graduate

### **GEO 568 - Climate Sensitivity. 3 Credits.**

Offered spring. Prereq., graduate standing in a science discipline. Earth's climate system response to global radiation imbalances caused by natural and anthropogenic forcings. Fundamentals of climate dynamics including earth's energy balance and the global circulation of heat; the numerous amplifying and dampening feedbacks governing fast and slow climate system response to forcing; and, the various estimates of earth's transient response and equilibrium sensitivity to increased atmospheric carbon dioxide concentration. Lectures, readings, discussions, small problem sets and projects. Level: Graduate

### **GEO 572 - Advanced Hydrogeology. 3 Credits.**

Offered autumn. Prereq., GEO 420 or consent of instr. Advanced concepts used in groundwater investigations, including flow systems analysis, hydrogeologic monitoring and sampling, resource evaluation, exploration, development and monitoring, and contaminant transport. Special problem areas in groundwater exploration and management. Level: Graduate

### **GEO 579 - Chemistry of Hot Springs. 3 Credits.**

Offered alternate years. Prereq., one year of college of chemistry or consent of instr. Hydrothermal systems support the most ancient microorganisms and may have been the locus for the first appearance of life on Earth. Terrestrial hot springs are the surface expression of deep circulation of fluids that concentrate elements, opening a window into processes leading to ore formation. This course discusses the chemistry and geology of hydrothermal systems including solute/gas geothermometry, acid/base reactions, oxidation/reduction reactions, mineral equilibrium, and microbial ecology as applied to terrestrial and

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submarine hydrothermal systems. The course includes an introduction to the use of geochemical models and a field trip to a hot spring system. Students are evaluated on class discussions and presentations, problems sets, and a term paper. Level: Graduate

### **GEO 582 - Topics in Structure & Geophysics. 1-12 Credits.**

(R-6 for M.S., R-12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: structural analysis, Precambrian crustal evolution, field trips on Rocky Mountain structure. Level: Graduate

### **GEO 583 - Topics in Stratigraphy, Sedimentation & Paleontology. 1-12 Credits.**

(R-6 for M.S., R-12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: evolution of life; Proterozoic stratigraphy; reefs through time. Level: Graduate

### **GEO 585 - Topics in Hydro Low-Temp Geochemistry. 1-12 Credits.**

(R-6 for M.S., R-12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: field methods, well design, contaminant transport, geochemical modeling. Level: Graduate

### **GEO 590 - Supervised Internship. 1-12 Credits.**

Offered intermittently. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **GEO 595 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **GEO 597 - Advanced Problems. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., consent of instr. Investigations of geological problems exclusive of thesis or dissertation research. Level: Graduate

### **GEO 599 - Thesis Research. 1-12 Credits.**

(R-6) Offered every term. Prereq., thesis proposal approval. Directed research to serve as thesis for the master degree. Credit assigned upon submittal of final copy of approved and bound thesis. Level: Graduate

### **GEO 699 - Dissertation Research. 1-12 Credits.**

(R-12) Offered every term. Prereq., dissertation proposal approval. Directed research to serve as dissertation for the Ph.D. degree. Credit assigned upon submittal of final copy of approved and bound dissertation. Level: Graduate

## German (GRMN)

### **GRMN 101 - Elementary German I. 4 Credits.**

Offered autumn. Emphasis on oral communication, with development in all major skill areas: listening, speaking, reading, and writing.

### **GRMN 102 - Elementary German II. 4 Credits.**

Offered spring. Prereq., GRMN 101 or requisite placement exam score. Emphasis on oral communication, with continuing development in all major skill areas: listening, speaking, reading, and writing.

Gen Ed Attributes: Foreign Language Requirement

### **GRMN 106H - Introduction to German Culture and Civilization. 3 Credits.**

This course provides an introductory overview of major developments, ideas, and influences involving German-speaking culture from its documented origins in the Roman era to today in English. Students will become familiar with the chronology and significance of key historical events in Central Europe as well as with major figures in such areas as politics, literature, art, and philosophy. Attention will also be given to important contributions that German-speaking culture has made globally.

Gen Ed Attributes: Historical Studies

### **GRMN 191 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GRMN 198 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **GRMN 201 - Intermediate German I. 4 Credits.**

Offered autumn. Prereq., GRMN 102 or requisite placement exam score. Continuation of active skills approach to German listening, speaking, reading, and writing.

Gen Ed Attributes: Foreign Language Requirement

### **GRMN 202 - Intermediate German II. 4 Credits.**

Offered spring. Prereq., GRMN 201 or requisite placement exam score. Continuation of 201.

Gen Ed Attributes: Foreign Language Requirement

### **GRMN 291 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **GRMN 292 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **GRMN 298 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **GRMN 301 - Studies in German Language, Media, and Culture I. 3 Credits.**

Offered autumn. Prereq., GRMN 202 or equiv. Native or near-native speakers of German may not apply credit for this course toward a German major or minor. The course emphasizes advanced development of the four linguistic skills: listening comprehension, reading, writing, speaking. Interactive approaches toward texts and media foster active participation for conversation. Focus is on development of communication skills, linguistic accuracy, and cross-cultural competence.

Gen Ed Attributes: Foreign Language Requirement

### **GRMN 302 - Studies in German Language, Media, and Culture II. 3 Credits.**

Offered spring. Prereq., GRMN 301 or equiv. Native or near-native speakers of German may not apply credit for this course toward a German major or minor. This course builds on GRMN 301 and further advances development of the four linguistic skills: listening comprehension, reading, writing, speaking. Use of different types of texts and media extending from GRMN 301 aims toward enhancing cross-cultural competency and proficiency for communication in spoken and written German.

Gen Ed Attributes: Foreign Language Requirement

### **GRMN 305 - Practicum in German Language. 4 Credits.**

Offered spring. Prereq., consent of instr. Offered as part of the Study Abroad program in Germany and Austria. Concentration on grammar topics and advanced language usage.

### **GRMN 311 - Introduction to German Literature. 3 Credits.**

Offered autumn. Prereq., GRMN 202 or equiv. Reading and discussion of selected works of German literature. Instruction in the fundamentals of textual analysis and terminology and discussion of works in historical context. Taught primarily in German.

### **GRMN 317L - Introduction to Multicultural Literature in Contemporary Germany. 3 Credits.**

Offered intermittently. Introduction to multicultural literature created during recent decades in Germany. Study topics include immigration, citizenship, multilingualism, identity; significant literary and cultural movements and selected writers in contemporary Germany.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GRMN 322L - Survey of German Cinema. 3 Credits.**

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Offered intermittently. The development of the German film from its beginnings in the late 19th century to the present. Topics include Expressionism, New Objectivity, the Nazi film, the German contribution to Hollywood, the post-war film in East and West Germany, and film in unified Germany.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GRMN 340L - Nature and the Environment in German Literature and Film. 3 Credits.**

An examination of the historical role of nature and the environment in the German literary and cinematic traditions. Course begins with the Roman Germanic periods and covers literary and cinematic works in cultural and historical context up until the present day. Attention given to the role of environmentalism in Central European culture today in light of themes of nature and the environment in German literature and film historically.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GRMN 350 - German Culture & Civilization. 3 Credits.**

Offered spring. Prereq., consent of instr. Offered as part of the Study Abroad program in Germany and Austria. Introduction to cultural topics, current events, and historical topics of Germany and Austria. Course content supplemented with on-site visits.

### **GRMN 351H - German Culture: Beginnings to Romanticism. 3 Credits.**

Offered intermittently in spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Overview of major events and currents in German culture to 1900 with emphasis on the arts, literature, and intellectual movements. Lectures in English.

Gen Ed Attributes: Historical Studies, Writing Course-Advanced

### **GRMN 352H - Germ Culture: Romanticism to the Present. 3 Credits.**

Offered intermittently in spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Overview of major events and trends in culture of German-speaking world from 1800 to the present with emphasis on the arts, literature, film, intellectual movements, and social and political developments. Lectures in English.

Gen Ed Attributes: Historical Studies, Writing Course-Advanced

### **GRMN 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., GRMN 202 or equiv. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GRMN 392 - Independent Study. 1-12 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **GRMN 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198,

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298, 398, 498) may count toward graduation.

### **GRMN 431 - German Literature 1760-1832. 3 Credits.**

Offered autumn. Prereq., consent of instructor. Readings, study, and discussion of writers, texts, and contexts in German literature from 1760 to 1832, including Enlightenment, Storm and Stress, Romanticism, and Classicism.

### **GRMN 441 - 19th Century German Literature. 3 Credits.**

Offered autumn. Prereq., consent of instructor. Readings, study, and discussion of writers, texts, and contexts in German literature from 1832 to 1900.

### **GRMN 451 - 20th and 21st Century German Literature. 3 Credits.**

Offered spring. Prereq., GRMN 311 or consent of instructor. Readings, study, and discussion of writers, text, and contexts in German literature from 1900 to present.

### **GRMN 491 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GRMN 492 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **GRMN 494 - Seminar in German Studies. 1-12 Credits.**

(R-12) Offered autumn. Prereq., GRMN 311 and 312. Advanced studies in major topics in German literature and culture.

### **GRMN 594 - Graduate Seminar. 3 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. A review and discussion of current research. Topics vary. Level: Graduate

### **GRMN 595 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics. Level: Graduate

### **GRMN 596 - Independent Study. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Out?of?class independent work of a research nature which involves intensive use of the University or other libraries; also, research carried on in another country under the direction of a University professor. Level: Graduate

### **GRMN 599 - Professional Paper. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **GRMN 696 - Independent Study. 1-6 Credits.**

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(R 6) Offered intermittently. Prereq., graduate standing. Out of class independent work of a research nature which involves intensive use of the University or other libraries; also, research carried on in another country under the direction of a University professor. Level: Graduate

### **GRMN 699 - Thesis. 1-9 Credits.**

(R?9) Offered intermittently. Prereq., graduate standing. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Global Humanities (GH)

### **GH 151L - Introduction to Western Humanities: Antiquity. 3 Credits.**

Offered autumn. Prereq., WRIT 101 (or higher) or equivalent. Western Civilization in Antiquity - Greek, Roman, Jewish and early Christian literatures.

### **GH 152 - Introduction to the Humanities Medieval to Modern. 3 Credits.**

Offered Spring. Prereq., WRIT 101 (or higher) or equivalent. Western Civilization in Modernity ? early modern (Renaissance) to twentieth century.

Writing Course-Intermediate

### **GH 161L - Asian Humanities. 3 Credits.**

Offered autumn. Coreq., LS 151L or consent of instr. Selective survey of classical South and East Asian perspectives on the humanities. Hinduism, Confucianism, Taoism and Buddhism are the primary traditions considered.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GH 191 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GH 191L - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GH 192 - Independent Study. 1-6 Credits.**

(R?9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **GH 291 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GH 292 - Independent Study. 1-9 Credits.**

(R?9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **GH 294 - Seminar/Workshop. 1-6 Credits.**

(R?6) Offered intermittently. A review and discussion of current research. Topics vary. Gen Ed Attributes: Ethical & Human Values Course

### **GH 326 - Stories East and West. 3 Credits.**



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Offered intermittently. Comparative study of stories in different genres from Asia and Europe.

### **GH 328L - Gender Sexuality India. 3 Credits.**

Offered intermittently. Examines the changing representation of gender and sexuality in Indian films over the last six decades. India has the largest film industry in the world, and films are the most important cultural unifier in the country. We will look at gender and sexuality in relation to religion, family, and the state, examining women's changing roles, heterosexuality, homosexuality, bisexuality and transgender, patterns of kinship and friendship.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GH 333 - Life and Times of Gandhi. 3 Credits.**

Offered every other autumn. Reflecting upon the life, ideas, work, and legacy of perhaps the single most important figure in India's national freedom movement, and surely one of the most remarkable figures anywhere in the past century, Mohandas K. (?Mahatma?) Gandhi, this course will examine some of Gandhi's own major writings, as well as different analyses of Gandhianism put forth by various critics inside and outside of India. We will begin with two of Gandhi's own writings, the autobiographical *Story of My Experiments with Truth*, and his seminal treatise on politics and civilization, *Hind Swaraj*. Then, we will investigate a variety of interpretive approaches to his life and work, ranging from the dramatic (Richard Attenborough's Academy Award winning film *Gandhi*) and the fictional (Raja Rao's *Kanthapura*) to the dramatic-documentarial (*The Making of the Mahatma*) and the social-scientific (Susanne and Lloyd Rudolph's *Gandhi: The Traditional Roots of Charisma*). Gandhi's spiritual life and its place in his politics will also be examined, as will his social activism. Finally, we will consider aspects of Gandhi's ongoing influence within and without India, such as the impact of his life and teachings on social activists and reformers like Sunderlal Bahugana in India and Martin Luther King, Jr. in America.

### **GH 351L - Exploring the Humanities. 3 Credits.**

(R?9) Offered intermittently. Intensive study of a specific historical period in Western humanities through its seminal literature, with an emphasis on intellectual and ethical paradigms.

### **GH 389E - Placebos: The Power of Words. 3 Credits.**

Situated at the crossroads of medicine and the humanities, this course looks into the changing reputation of the placebo effect, with special attention to the power of words to induce therapeutic?or counter-therapeutic?effects.

Gen Ed Attributes: Ethical & Human Values Course

### **GH 390 - Undergraduate Research. 1-6 Credits.**

(R?6) Offered intermittently. Directed individual research and study appropriate to the back ground and objectives of the student.

### **GH 391 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GH 391L - Special Topics. 1-9 Credits.**

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(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **GH 392 - Independent Study. 1-12 Credits.**

(R?12) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **GH 398 - Coop Education/Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **GH 415 - Same Sex Unions Literature. 3 Credits.**

Offered intermittently. Examines the literary representation of same-sex unions in European and Indian literary traditions.

### **GH 484 - Novel Ancient and Modern. 3 Credits.**

Offered yearly. Two antithetical models for the construction of a novel.

Gen Ed Attributes: Writing Course-Advanced

### **GH 490 - Undergraduate Research. 1-6 Credits.**

(R?6) Offered intermittently. Directed individual research and study appropriate to the background and objectives of the student.

### **GH 491 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics.

### **GH 492 - Independent Study. 1-9 Credits.**

(R?9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **GH 494 - Seminar/Workshop. 3 Credits.**

(R?9) Offered intermittently. Concentrated studies in specific genres and periods.

### **GH 498 - Coop Education/Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

## Global Leadership (GBLD)

### **GBLD 110 - Global Challenges and Leadership. 1 Credit.**

Prereq., admission to the GLI and consent of GLI Director. Introduction to key global challenges, identifying issues inherent in the challenges, and working with others to research and tackle the challenges.

### **GBLD 194 - Seminar. 3 Credits.**

(R-6) Offered autumn. Prereq., students enrolled in the Global Leadership Certificate program. Small seminar-style courses focused on multidisciplinary approaches to new and enduring global challenges that include intercultural or international perspectives taught by UM faculty around campus.

### **GBLD 220 - Models of Leadership. 2 Credits.**

Prereq., admission to the GLI and consent of GLI Director. Exploration of leadership models, how culture influences the effectiveness of those models, and how one's leadership style can best be identified, developed, and put into action.

### **GBLD 294 - Seminar. 1-6 Credits.**

(R-6) Presentations by students, faculty, and professionals on issues and topics in their field.

### **GBLD 398 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **GBLD 499 - GLI Capstone. 1-2 Credits.**

(R-3) Prereq., senior standing and consent of GLI Director; culminating project addressing a global question, to include a written proposal (completed and presented in semester 1) and execution of a project (completed and presented in semester 2).

## Global Youth Development (GYD)

### **GYD 495 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **GYD 510 - Intercultural Skills. 3 Credits.**

Offered autumn. Focus on applied skills in two areas: crosscultural negotiation and conflict management; program development and grant writing. Level: Graduate

### **GYD 520 - Critical Issues. 3 Credits.**

Exploration of psychological, political, spiritual, ethical, and practical dimensions of offering assistance cross-culturally. This course includes discussion of ethical and personal issues related to intercultural work, gender and development, trauma, program evaluation, etc. Level: Graduate

### **GYD 595 - Special Topics. 1-4 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **GYD 596 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Directed readings and other individualized study topics guided by faculty. Level: Graduate

### **GYD 598 - Internship. 1-6 Credits.**

(R-6) Offered every term. Introduction to service learning in applied settings, usually local. Level: Graduate

### **GYD 599 - Professional Projects. 1-2 Credits.**

(R-2) Offered every term. Final Master's project related to internship; may be presented as a grant proposal, policy analysis, or portfolio. Level: Graduate

### **GYD 695 - Special Topics. 1-4 Credits.**

(R-4) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **GYD 698 - Intercultural Internship. 1-4 Credits.**

(R-4) Offered every term. Supervised intercultural experience through Peace Corps, VISTA, or other organization approved by program faculty. Level: Graduate

### **GYD 699 - Thesis. 1-2 Credits.**

(R-2) Offered every term. Final master's thesis based on research related to internship placement. Level: Graduate

## Grad Study-Interdisciplinary (GS) < University of Montana

### Grad Study-Interdisciplinary (GS)

**GS 594 - Graduate Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., graduate standing or consent of instr. Topics vary. Level: Graduate

**GS 599 - Thesis/Professional Paper/Exam. 1-18 Credits.**

**GS 693 - International Experience. 1-6 Credits.**

(R-6) offered intermittently. Field-based, experiential courses that focus on international culture. Level: Graduate

**GS 696 - Independent Study. 1-8 Credits.**

(R-8) Offered every term. Prereq., consent of instr. Original investigations of problems not part of dissertation. Level: Graduate

**GS 697 - Advanced Research. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of instr. Independent research projects other than dissertation. Level: Graduate

**GS 699 - Dissertation. 1-18 Credits.**

(R-18) Offered every term. Prereq., consent of instr. Doctoral dissertation research activities. Level: Graduate

## Graphic Design (GDSN) < University of Montana

### Graphic Design (GDSN)

#### **GDSN 149A - Digital Imaging I. 3 Credits.**

Offered autumn and spring. Introduction to the fundamentals of digital imaging and composition principles, primarily using Adobe Photoshop. Emphasis on formal 2D design components, typography, and digital compositing. Consideration of historical and contemporary approaches.

Gen Ed Attributes: Expressive Arts Course (A)

#### **GDSN 231 - Graphic Design Applications. 3 Credits.**

Offered spring. This course teaches students to plan and execute visual communication according to the needs of audiences in specific contexts. A thorough examination of the principles of design, theories of communication, and strategies for problem solving will be presented.

## Greek (GRK) < University of Montana

### Greek (GRK)

#### **GRK 101 - Elementary Greek I. 3 Credits.**

Offered autumn. Introduction to Classical Greek is the first courses of a two-semester sequence, designed to enable the student to read Greek authors in the original Greek as soon as possible. Based upon selected texts from Tragedians, Plato, Xenophon, Menander, New Testament, and other major authors.

#### **GRK 102 - Elementary Greek II. 3 Credits.**

Offered spring. Prereq., GRK 101 or equivalent. Continuation of 101. Greek grammar, vocabulary, readings of ancient Greek writings with the aid of a lexicon.

Gen Ed Attributes: Foreign Language Requirement

#### **GRK 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **GRK 201 - Intermediate Greek I. 3 Credits.**

Offered autumn. Prereq., GRK 102 or equiv. Attic prose and poetry Plato, Thucydides, Euripides.

Gen Ed Attributes: Foreign Language Requirement

#### **GRK 202 - Intermediate Greek II. 3 Credits.**

Offered spring. Prereq., GRK 201 (211) or equiv. Readings from Homer's Iliad and/or Odyssey.

Gen Ed Attributes: Foreign Language Requirement

#### **GRK 292 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

#### **GRK 300 - Major Greek Writers. 3 Credits.**

(R?12) Offered autumn and spring. Prereq., GRK 202 or equivalent. Homer, lyric poets, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, Xenophon, Plato, Aristotle, Hellenistic philosophers, New Testament, etc. Selection to fit students' interests and programs.

#### **GRK 391 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **GRK 392 - Independent Study. 1-9 Credits.**

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(R?9) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **GRK 492 - Independent Study. 1-9 Credits.**

(R?9) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.



## Health (HTH)

### **HTH 110 - Personal Health and Wellness. 3 Credits.**

Focus on health principles and their relevance in contemporary society, the evaluation and application of scientific advances to hypothetical lifestyles, and on contemporary problems in life.

### **HTH 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of advisor and instr. Course material appropriate to the needs and objectives of the individual student.

### **HTH 370 - Peer Health Education. 3 Credits.**

Introduction to peer health education strategies and techniques. Instruction in the areas of wellness, drug and alcohol abuse prevention, and sexual assault prevention. Students develop and implement a peer health program focused on prevention of major health problems among college students.

### **HTH 395 - Peer Health Practicum. 1-3 Credits.**

(R-6) Prereq., HTH 370. Practical experience in planning, coordinating, and implementing health education activities for the campus community. Students address topics related to wellness, drug and alcohol prevention, or sexual assault awareness.

### **HTH 430 - Health and Mind/Body/Spirit. 3 Credits.**

Prereq., junior standing. Overview of how the mind/body/spirit relationship affects health. Examination of current research exploring how thoughts, emotions, attitudes, and beliefs influence and mediate health outcome. Exploration of the theoretical applications of mind/body/spirit in health and healing used in contemporary society.

### **HTH 465 - Leading Health and Human Performance Organizations. 3 Credits.**

Prereq., KIN 205 and junior standing. Leadership, management, organizational structure assertiveness, conflict management, public relations, decision-making, budget management, and a broad overview of human resource management, all as they relate to health and human performance settings.

### **HTH 475E - Legal and Ethical Issues Health and Exercise Professions. 3 Credits.**

Prereq., upper-division or graduate status. Legal bases for litigation in the health and exercise professions, with emphasis on negligence, liability, and risk identification and risk management. Utilizing the Western ethical traditions, the ethics component examines moral/ethical development through the lifespan via analysis of specific human behaviors.

Gen Ed Attributes: Ethical & Human Values Course

### **HTH 481 - Teaching HHP. 1-3 Credits.**

(R-4) Prereq., consent of instructor. Students assist in the preparation and grading of demonstrations and laboratory assignments, and laboratory instruction of undergraduate students enrolled in HHP laboratory courses. Students are given advanced instruction in principles of the HHP course.

### **HTH 492 - Independent Study. 1-3 Credits.**

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(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HTH 494 - Seminar. 1 Credit.**

(R-2) Co-req., HTH 395 and CHTH 498. Health Behavior Coach practicum and internship students enrolled in this seminar will have the opportunity to critically analyze their coach/client interactions and to receive feedback from faculty and peers regarding their coaching skills. Students' coaching skills will be enhanced and strengthened through assigned readings and skill building activities. CR/NCR

### **HTH 498 - Internship. 2-6 Credits.**

(R-6) Prereq. all INPH concentrations minimum junior standing and ECP 120/121 (or equivalent). Prereqs and coreqs per concentration. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must take KIN 410 and COA 405 as corequisites. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must take KIN 460/483/484 as corequisites. Community Health: CHTH 335. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 16 credits their internship semester.

## Health Enhancement (HEE)

### **HEE 203 - Professional Activities I. 2 Credits.**

The instruction of basic skills for tennis, basketball, and Western Swing. Techniques, drills, and strategies will be taught. Demonstration and instruction skills developed. Active participation required.

### **HEE 204 - Professional Activities II. 2 Credits.**

The instruction of basic skills for soccer, volleyball, and golf. Techniques, drills, and strategies will be taught. Demonstration and instruction skills developed. Active participation required.

### **HEE 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HEE 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of advisor and instr. Course material appropriate to the needs and objectives of the individual student.

### **HEE 301 - Methods of Secondary HE. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course. Application of educational theory in planning, analyzing, and presenting learning experiences to typical and atypical populations in secondary school physical education for students in grades 7-12. Active participation required.

Gen Ed Attributes: Writing Course-Advanced

### **HEE 302 - Methods of Instructional Strategies in Elementary PE. 3 Credits.**

Offered every term. Prereq. Open to majors in Elementary Education or Early Childhood Education or admission into Teacher Education Program in the College of Education. Application of educational theory in planning, analyzing, and presenting learning experiences to typical and atypical populations in elementary school physical education for children in grades K-6. Active participation required.

### **HEE 330 - Promoting Well-Being in the Classroom P-12. 2 Credits.**

This course is designed to increase students awareness of the critical role teachers play in enhancing childrens emotional, social, mental and physical health. In addition, students will be encouraged to explore the influence of family, community, and school environment on the prevention of substance use and abuse and on the well-being of children and adolescents.

### **HEE 340 - Methods of Health Education. 3 Credits.**

Prereq., admission to the teacher education program. Focus on developing and implementing strategies to teach K-12 health education.

### **HEE 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **HEE 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **HEE 492 - Independent Study. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HEE 498 - Internship. 2-6 Credits.**

(R-6) Offered every term. Prereq. all HHP options minimum junior standing and ECP 120/121 (or equivalent). Prereqs per option. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must also have completed KIN 410 and COA 405. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must also have completed KIN 460/483/484. Community Health: CHTH 335. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship 498 may count toward graduation. Students should not be registered for more than 16 credits their internship semester.

# Health Information Technology (HIT) < University of Montana

## Health Information Technology (HIT)

### **HIT 101 - Intro to Healthcare Informatic. 3 Credits.**

Offered spring. Offered at Missoula College. Introduces the discipline of healthcare informatics. An overview of the subject including history, basic knowledge of healthcare informatics and tools as applied in support of healthcare delivery. Students will gain an introductory level about the complexities of health care and how informatics fits within the US Healthcare System.

### **HIT 265 - Electronic Health Records. 3 Credits.**

Offered at Missoula College. Prereq., HIT 101. An introduction to the electronic health record (EHR). Students will study the use of the EHR in improving healthcare quality, accessibility, and cost-effectiveness. EHR implementation and its use within the internal clinical office will be examined. The EHR will be studied in the context of a comprehensive Health Information System (HIS) supporting our society's interdisciplinary clinical healthcare system.

### **HIT 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HIT 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## Health and Human Performance (HHP)

### **HHP 172 - CFM Crossfit. 1 Credit.**

Offered every term. Students may include up to but not more than 4 credits earned in HHP 100-179 activity courses in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered go to the HHP Activity Program website.

### **HHP 173 - YMCA Classes. 1 Credit.**

Offered every term. Students may include up to but not more than 4 credits earned in HHP 100-179 activity courses in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered go to the HHP Activity Program website.

### **HHP 520 - Research Methods. 3 Credits.**

Offered every term. An introduction to research design and methodologies in integrative physiology, athletic training, and related fields. The course is designed to explore the consumption of research literature, study design, methodology, and the associated data analyses and interpretation as related to hypothesis-driven research. Students will learn the foundational approaches to modern research in order to become better consumers of research in the field, and enable their own exploration in research design. Level: Graduate

### **HHP 523 - Case Studies in Performance Psychology. 3 Credits.**

Offered intermittently. Prereq., consent of instr. Through the usage of both real and hypothetical case studies, the course will examine the field of sport/performance psychology and its role in the broader field of sports medicine. Level: Graduate

### **HHP 524 - Ethics & Human Performance. 3 Credits.**

A critical examination of the ethical issues dominating the field of health and human performance and beyond with special emphasis on developing the conceptual frameworks needed to articulate our concerns and engage in meaningful dialogue with others. Level: Graduate

### **HHP 525 - Advanced Biomechanics. 3 Credits.**

This course is focused on developing laboratory skills and an advanced understanding of the quantitative and qualitative basis for human motion. Particular emphasis will be placed on the Newtonian mechanics governing biological motion and the roles of the musculo-skeletal, nervous and cardio-vascular systems during human activity. This integrative approach will be used to quantify and understand motion by, and within, the human body; examples will be drawn from the sub-disciplines of clinical gait analysis, gerontology, sports medicine, biological engineering and performance physiology. The lecture portion of this course is co-convened with KIN425 Biomechanics. Level: Graduate

### **HHP 526 - Higher Education Pedagogy in Integrative Sciences. 3 Credits.**

This course discusses the science behind student learning, scientific teaching, assessments and rubrics, active learning, project based learning, teaching technology, inclusive teaching and universal design, classroom and course management, and course design. Level: Graduate

**HHP 528 - Advanced Exercise Prescription. 3 Credits.**

Offered spring even years. Prereqs., Graduate status or consent of the instructor. This class presents the principles and practices of advanced athletic performance training in a thorough and useful sequence. Testing and improving power, strength, speed, quickness, coordination, agility, flexibility, local muscular endurance, and cardiovascular aerobic capacity and endurance are covered based on the scientific record. Students will learn how to tailor sport specific training exercises and drills and periodize the training program precisely for peak performance at critical points in the competitive season. Level: Graduate

**HHP 529 - Advanced Exercise Physiology I. 3 Credits.**

Offered autumn. Prereq., HHP 377, 378 or equiv. Advanced study of the effect of work, activity and exercise on human biochemistry, metabolism, endocrinology and muscle function. Level: Graduate

**HHP 530 - Advanced Exercise Physiology II. 3 Credits.**

Offered spring odd years. Prereq., HHP 529 or equiv. Advanced study of system physiology (circulatory, respiratory and renal function) and environmental factors applied to physical work, activity and exercise Level: Graduate

**HHP 531 - Lab Procedures In Exercise Science. 3 Credits.**

Offered autumn. Introduction to common laboratory tools associated with clinical and health assessment techniques, research measures, and data collection. Level: Graduate

**HHP 540 - Community Health Promotion Strategies. 3 Credits.**

Offered autumn even-numbered years. Exploration of the role of the health professional in the development and implementation of educational, organizational, economic, and/or environmental strategies that promote individual and community health. Level: Graduate

**HHP 541 - Program Planning in Community Health. 4 Credits.**

Prereq. HHP 540. Overview of the issues, approaches, and techniques community health educators and professionals utilize in planning and implementing programs to assist communities in improving health status and reducing risky behaviors and their determinants. Application of program planning research methods including needs analyses, data collection, theory application, strategy development, and evaluation. This course co-convenes with CHTH 445. Level: Graduate

**HHP 542 - Advanced Study Mind/Body/Spirit. 3 Credits.**

This course is a comprehensive exploration of the body, mind and spirit relationship. An in-depth examination of the concepts, theoretical application, and research of the mind/body/spirit relationship will be applied to health, prevention of disease, and healing used in contemporary society. Conventional thinking will be stretched & challenged as diverse M/B/S ideas, constructs and paradigms will be considered & discussed. Level: Graduate

**HHP 544 - Community-Based Participatory Research Methods for Health. 3 Credits.**

Offered autumn even years. Instruction will present the principles and practice of community-based participatory research methods (CBPR) and mixed-methods approaches that offers strategies for studying and addressing health and social problems. Level: Graduate

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### **HHP 560 - Advanced Electrocardiogram Assessment. 2 Credits.**

The course will be delivered in-person (face-to-face), and includes a prerequisite of undergraduate exercise physiology. Evaluation in the form of a traditional letter grade will be based on performance on exams, on-line quizzes, a lab practical, lab practical mentoring, a topical paper and presentation. Level: Graduate

### **HHP 583 - Advanced Exercise, Disease, and Aging. 3 Credits.**

Prereq., undergraduate exercise physiology and either KIN 460 or HHP 560. The class performance will include the assignment of traditional letter grades based upon exams, on line quizzes, a topical paper and presentation, and mentoring of undergraduate peer-teaching. Level: Graduate

### **HHP 584 - Laboratory for Advanced Exercise, Disease, and Aging. 1 Credit.**

The course is designed for IPAT masters students and doctoral students in the proposed Integrative Physiology and Rehabilitation Sciences programs. Prereq., undergraduate exercise physiology and either KIN 460 or HHP 560. Students will be evaluated using a traditional letter grade as assessed using lab practical assignments, an exam, and performance on team leading human subjects exercise testing risk assessments, exercise testing and interpretation, client counseling for exercise prescriptions and cardiovascular and metabolic disease risk modification using a 'lifestyle medicine' approach. Level: Graduate

### **HHP 594 - Seminar. 1-3 Credits.**

(R-6) Offered spring. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

### **HHP 595 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **HHP 596 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **HHP 597 - Research. 1-6 Credits.**

(R-6) Offered every term. Prereq., HHP 486, 520. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **HHP 598 - Internship. 1-6 Credits.**

(R-6) Offered every term. Prereq., current First Aid and CPR certification, consent of advisor and instructor, and Community Health prereq., HHP 540 and HHP 544. Supervised field work in public and private agencies and institutions. 45 hours of internship site work = 1 credit. Level: Graduate

### **HHP 599 - Professional Paper. 1-3 Credits.**

(R-3) Offered every term. Prereq., HHP 486, 520. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **HHP 695 - Special Topics. 3 Credits.**



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Offering for doctoral students in the proposed Integrative Physiology and Rehabilitation Sciences program and for masters students in IPAT. Level: Graduate

### **HHP 699 - Thesis/Dissertation. 1-18 Credits.**

(R-18) Option for the proposed doctoral in Integrative Physiology and Rehabilitation Sciences. Work will reflect a research project designed by the doctoral candidate, their doctoral committee chair and with input from the doctoral committee members. Level: Graduate

## Heavy Equipment Operation (HEO)

### **HEO 146 - Safety & Basic Controls. 5 Credits.**

Offered autumn. Offered at Missoula College. Orientation to the safe operation and basic control of crawler-tractors, scrapers, front-end loaders, motor graders, backhoes, trucks, and other heavy equipment units. Sufficient time is allowed for the development of basic machine operational skills.

### **HEO 148 - Operational Skill Building. 5 Credits.**

Offered autumn. Offered at Missoula College. Advancement of basic skills. Proper understanding and operation of heavy equipment is pursued. Time is allowed for development of proper operational techniques.

### **HEO 150 - Job Simulation. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., HEO 146 and HEO 148. Incorporates learned skills into entry-level, industrial situations. Emphasis is on advanced equipment usage, problem definition and resolution, project-type earth moving assignments, proper equipment, and safety regulations. Course may allow participation in cooperative project efforts within the community.

### **HEO 151 - Service & Maintenance. 2 Credits.**

Offered autumn. Offered at Missoula College. Different types of lubricants and their applications, scheduled and preventive maintenance procedures, and importance of periodic services and maintenance. Also included are safety procedures and regulations.

### **HEO 153 - Construction Theory & Specialized Equipment. 5 Credits.**

Offered spring. Offered at Missoula College. Prereq., M 111 or M 105 and HEO 148. Study of construction principles, specialized equipment, production estimates, and various related subjects.

### **HEO 191 - Special Topics. 1-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **HEO 192 - Independent Study. 1-6 Credits.**

Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## Historic Preservation (HPRV) < University of Montana

### Historic Preservation (HPRV)

#### **HPRV 400 - Historic Preservation. 3 Credits.**

Offered spring even-numbered years. This course is intended to provide a comprehensive foundation to historic preservation practice and issues. Topics include the history and theory of the American historic preservation movement, identification and documentation of historic properties, preservation technology, strategies for conservation of historic resources and a critical examination of the philosophy and principles of preservation.

## History: American (HSTA)

### **HSTA 101H - American History I. 4 Credits.**

(AM) Offered autumn. A comprehensive introductory history of Colonial, Revolutionary, and 19th century America, to 1877. Lecture-discussion. Credit not allowed for both 101H and 103H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTA 102H - American History II. 4 Credits.**

(AM) Offered spring. A comprehensive introductory history of the U.S. since 1877. Lecture-discussion. Credit not allowed for both HSTA 102H and 104H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTA 103H - Honors American History I. 4 Credits.**

(AM) Offered autumn. Enrollment by consent of instructor. A comprehensive introductory history of Colonial, Revolutionary, and 19th century America, to 1877. Lecture-honors discussion. Credit not allowed for both 103H and 101H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTA 104H - Honors American History II. 4 Credits.**

(AM) Offered spring. Enrollment by consent of instructor. A comprehensive introductory history of the U. S. since 1877. Lecture-honors discussion. Credit not allowed for both HSTA 102H and 104H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTA 150H - The Veteran's Experience. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Interdisciplinary, historical perspective of the veteran's experience in American history, since antiquity, and in American society today. Examines the nature of military service, experiences of war, and consequences of service and war on veterans and their families through the study of sources from history, classical literature, literature, philosophy, and ethics.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTA 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTA 198 - Internship. 1-6 Credits.**

Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HSTA 201E - History of American Democracy. 4 Credits.**

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(AM) Offered Intermittently. What does it mean for “the people” to rule? Who should be able to vote? Should social equality be guaranteed to all? This course explores how Americans have battled over these and other ethical questions of democratic governance and society from the founding of the United States to the recent past. It highlights fundamental struggles over political, socio-economic, and cultural power and their relationship to governance as well as tensions between the United States’ professed democratic commitments to equality and its persistent practices of, for example, imperialism, racism, sexism, and labor exploitation.

Gen Ed Attributes: Ethical Human Values Course, Democracy and Citizenship (Y)

### **HSTA 255 - Montana History. 3 Credits.**

(AM) Offered autumn. An introductory and interpretive history from Lewis and Clark to 2000.

### **HSTA 262 - Abolitionism. 3 Credits.**

(AM) Interdisciplinary, historical perspective on early 19th century movement to abolish slavery and racial discrimination in the United States.

### **HSTA 275 - Making History Public. 3 Credits.**

(AM) Explores the wide-ranging field of public history. Examines the methods, theories, and ethics that guide how public historians exhibit history in museums, engage the public with digital projects, provide historical context in public places, work with local communities, and use historical expertise in law and policy. Discusses current and past controversies in public history and surveys how the digital age has transformed aspects of public history. Students work on a class project that will give them hands-on experience with a real public history project. Field trips included.

### **HSTA 285H - Sex and Gender in US History. 3 Credits.**

Offered intermittently. (AM) This course provides a broad overview of the history of gender and sexuality in America. This course investigates the varied and changing attitudes toward gender identity, gender roles, gender relations, sexual difference, sexual identity, and sexual relationships in North America from the fifteenth century to the present. By examining how ideas about gender, sex, and sexuality have changed over time and varied according to race, class, religion, and ethnicity, students will gain historical perspective on contemporary debates on these issues.

Gen Ed Attributes: Historical Studies

### **HSTA 291 - Special Topics. 1-12 Credits.**

(R-12) (AM) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTA 307Y - The American Revolution and Founding Era. 3 Credits.**

(AM) Offered intermittently. This course introduces students to the critical period of the American Revolution and Founding era (c. 1760-1790). The first part examines the origins of the Revolution and its aftermath with particular attention to political, intellectual, economic, social, and cultural factors. The second part examines the creation and ratification of the United States Constitution.

Gen Ed Attributes: Democracy and Citizenship (Y)

## University Of Montana

### **HSTA 315 - Early American Republic. 3 Credits.**

(AM) Prereq., WRIT 101 (or higher) or equivalent. Democracy, nationalism and sectionalism, the War of 1812, the second party system, social order and disorder, the capitalist revolution.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTA 316 - American Civil War Era. 3 Credits.**

(AM) Civil War and Reconstruction; the triumph of the industrialist and capitalist ethic.

### **HSTA 320 - Birth of Modern US. 3 Credits.**

(AM) The history of the U.S. from 1877 to 1920 is largely the story of Americans responding to profound social, cultural and economic change. In an effort to bring order to their changing world, Americans created new institutions, retooled their ideologies, and improved the nation's infrastructure. The order they created is, in modified form, still with us today. Students will explore the myriad changes that transformed the United States during this period and study the social, political, and cultural struggles that shaped the emergence of Modern America.

### **HSTA 321 - America in Crisis. 3 Credits.**

(AM) This era in U.S. history was marked by a series of crises: the contested transition to modernity during the 1920s, the Great Depression, and World War II and its aftermath. This course will explore how Americans responded to these crises, why they responded to them the way they did, and how their responses altered the society in which they lived.

### **HSTA 322 - U.S. History: WWII to Present. 3 Credits.**

(AM) The Cold War and its consequences, the civil rights revolution, affluence and anxiety, counter-culture, political radicalism, feminism, the Nixon years, Watergate and after.

### **HSTA 323 - U.S. in the 1950s. 3 Credits.**

(AM) Examines the political, social, cultural, intellectual developments of America in the 1950s. Particular emphasis is placed on cultural history.

### **HSTA 324 - U.S. in the 1960s. 3 Credits.**

(AM) Examines the political, social, cultural, intellectual developments of America in the 1960s. Topics include the Great Society, political radicalism, the counter culture, black radicalism, and Vietnam.

### **HSTA 326 - Digital Worlds of Early America. 3 Credits.**

(AM) Offered Intermittently. Surveys early American history, with particular attention to the period between 1600 and 1776. Examines the impact of our digital age on the practice of early American history and the dissemination of knowledge about it to a wide public. Through assignments and hands-on projects, students will learn about the digital humanities and explore specific digital history approaches, methods, and public outreach.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTA 333 - American Military History. 3 Credits.**

## University Of Montana

(R-6) (AM) The French and Indian Wars to Vietnam and beyond; chronological and topical accounts.

### **HSTA 335 - Movie America. 3 Credits.**

(AM) This course examines major topics and themes in United States history from the early twentieth century to the present using movies as primary sources.

### **HSTA 342H - African American History to 1865. 3 Credits.**

(AM) Offered intermittently. Survey of the African American experience from the African background to the end of the Civil War. Focus on Black American quest for the American Dream, and how Blacks attempted to deal with the challenges of enslavement and racism.

### **HSTA 343H - African American History Since 1865. 3 Credits.**

(AM) Study of the African American experience since the Civil War. Change and continuity in the African American experience, the fight against Jim Crow, the struggle for civil rights, and post-civil rights economic, political, social and cultural developments and challenges.

Gen Ed Attributes: Historical Studies

### **HSTA 344 - African-American Struggle for Equality. 3 Credits.**

(AM) A survey of the various efforts by African Americans to achieve racial equality in the United States from the late 19th century through the 1960s.

### **HSTA 347 - Voodoo, Muslim, Church: Black Religion. 3 Credits.**

(AM) Prereq., WRIT 101 (or higher) or equivalent. The African-American religious experience encompasses Islam, Christianity, Santeria, voodoo, and many others. In this course, students will examine the history of religious expression within the African-American community from the colonial era through the twentieth century. Central to the course is the question, "How did religion shape the experience of the African-American community?" Students will also examine the ways in which religious practice influenced social, political, and cultural changes in American history.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTA 361 - The American South. 3 Credits.**

(AM) Social history of the American South with particular attention to race, class, and gender.

### **HSTA 370H - Women in America: Colonial Period to Civil War. 3 Credits.**

(AM) Offered autumn. Interpretive overview of major themes and events in U.S. women's history to 1865. Same as WGS 370H. Gen Ed Attributes: Historical Studies

### **HSTA 371H - Women in America: Civil War to Present. 3 Credits.**

(AM) Offered spring. Interpretive overview of major themes and events in U.S. women's history from 1865 to the present. Gen Ed Attributes: Historical Studies

### **HSTA 373 - American Thought to 1865. 3 Credits.**

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Offered alternate years. This course introduces students to major themes, questions, topics, and problems in American intellectual life from the early seventeenth century until the Civil War. It addresses the intellectual traditions upon which the United States was built and explores the history of American thought at the intersections of the history of religion, art, politics, scientific explorations, education, gender, race, and culture.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTA 374 - Doing Local History: Missoula. 3 Credits.**

(AM) Offered Intermittently. This course introduces students to the history of Missoula and the surrounding area, as well as to the practice of public history. Students will complete a hands-on project in researching and disseminating local history. Possible approaches include conducting oral histories, engaging in digital history, and/or creating historical exhibits or tours.

### **HSTA 377 - Alcohol in American History. 3 Credits.**

(AM) This course explores the controversial history of alcohol in American history beginning in the colonial period and ending in the recent past. It blends varied historical approaches, including political, legal, business, social, and cultural history, to interrogate the manifold ways that alcohol has shaped the American nation and the everyday lives of its citizens.

### **HSTA 380 - American Constitutional History. 3 Credits.**

(AM) An examination of major issues in the American constitutional past. Topics include the creation of the U.S. Constitution and the problem of "original intent," courts and judicial review, slavery and anti-slavery, the bill of rights, industrial capitalism and the welfare state, and majority rule and minority rights in American democracy.

### **HSTA 382H - History of American Law. 3 Credits.**

(AM) Issues in the social history of law from the colonial period to the present.

### **HSTA 385 - Families & Children in America. 3 Credits.**

(AM) Prereq., WRIT 101 (or higher) or equivalent. Historical overview of families and children in the United States from the colonial era to the present. Topics include changing patterns of family life, the evolution of attitudes toward children and youth, the relationship between the American family and the nation-state, and debates over "family values" from the nation's founding to the present.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTA 391 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTA 405 - Public Problems & US Democracy. 3 Credits.**

(AM) Offered Intermittently. This course challenges students to engage in the craft of researching and writing history. It is structured around the general theme of public problems and American democracy. Students are required to make an original contribution to our historical understanding of this theme by crafting a substantial research essay rooted in the analysis of primary sources.



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Gen Ed Attributes: Writing Course-Advanced

### **HSTA 415 - The Black Radical Tradition. 3 Credits.**

(AM) Offered intermittently. Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200 and only open to majors and minors in History or African-American Studies or by consent of instructor. From slave revolts through to the Move rebellion in Philadelphia, this course examines how the African-American community has engaged in radical efforts to change the status quo in the name of seeking justice.

Gen Ed Attributes: Writing Course-Advanced

### **HSTA 417 - Prayer & Civil Rights. 3 Credits.**

(AM) Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200 and only open to majors and minors in History or African-American Studies or by consent of instructor. This course explores the meaning of public prayer in the Civil Rights Movement. Built around the question, "Does religion help or hinder the pursuit of social change?" this class combines historical and religious studies inquiry to trace changes in civil rights activists' efforts to make use of religion. By focusing on a particular religious practice - in this case prayer - in a specific, but limited period of time, this course challenges students to consider how meaning is formed through historical action and study the social significance of religious practice. This formed through historical action and study the social significance of religious practice. This course complicates prevailing ideas about the normalcy of African-American religious practitioners' prayer, invites students to examine their assumptions about the nature of prayer, and traces how religion spilled out of sanctuaries into the streets during the civil rights era.

Gen Ed Attributes: Writing Course-Advanced

### **HSTA 427 - Freedom, Slavery, Equality. 3 Credits.**

(AM) Offered Intermittently. Prereq., WRIT 101 or equivalent, HSTR 200, or by consent of instructor; This research seminar familiarizes students with the practice of historical research and writing. Our focus is on the study of freedom, slavery, and equality in early America (c. 1600-1860). Students produce an original piece of historical writing based on primary source research. Level: Undergraduate

Gen Ed Attributes: Writing Course-Advanced

### **HSTA 461 - Research in Montana History. 3 Credits.**

(AM) Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200 and enrollment for history majors and minors, graduate students in history, or by consent of the instructor. This course is a research and writing seminar in Montana history. Students will learn advanced research methodology in history and will be exposed to a variety of databases and source collections in Montana history that are available locally and online. Students will research and write a primary-source based paper on a topic in Montana history. This course fulfills the upper-division writing requirement for the history department and the university.

Gen Ed Attributes: Writing Course-Advanced

### **HSTA 471 - Writing Women's Lives. 3 Credits.**

(AM) Prereq., WRIT 101 or HSTR 200 or by consent of the instructor. Upper-division writing-intensive seminar in women's history. Students will write an original research paper based on primary source materials.

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Gen Ed Attributes: Writing Course-Advanced

### **HSTA 491 - Special topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTA 494 - Seminar. 1-6 Credits.**

(R-6) Consent of instructor.

### **HSTA 501 - Readings in Early American History. 3 Credits.**

For students enrolled in History MA or PhD program; or consent of instructor. Graduate readings course in U.S. history covering the period from pre-contact to 1877. Level: Graduate

### **HSTA 502 - Readings in Modern American History. 3 Credits.**

Graduate readings course in U.S. history covering the period from 1877 to the present. Level: Graduate

### **HSTA 551 - The Early American Republic. 3 Credits.**

For students enrolled in History MA or PhD program; or consent of instructor. Intensive reading. Level: Graduate

### **HSTA 553 - Modern America. 3 Credits.**

Intensive reading. Level: Graduate

### **HSTA 566 - The American West. 3 Credits.**

Intensive reading. Level: Graduate

### **HSTA 570 - U.S. Women's History. 3 Credits.**

Intensive readings. Level: Graduate

### **HSTA 577 - Law, Capitalism, and Democracy in U.S. History. 3 Credits.**

For students enrolled in History MA or PhD program; or consent of instructor. This graduate colloquium introduces students to the scholarly literatures of three broad and overlapping fields: U.S. legal history and the history of the American state; the history of American capitalism; and the history of American democracy. Students will interrogate classic scholarship and gain a strong understanding of the current state of scholarly conversations in these fields. Level: Graduate.

### **HSTA 594 - Seminar. 1-12 Credits.**

(R-12) Prereq., 27 credits in history. Directed research. Level: Graduate

### **HSTA 595 - Special Topics. 9.000 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **HSTA 596 - Independent Study. 1-12 Credits.**

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(R-12) Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **HSTA 597 - Independent Study. 1-9 Credits.**

(R-9) Directed individual research and study appropriate to the back ground and objectives of the student.  
Level: Graduate

### **HSTA 598 - Internship. 1-8 Credits.**

(R-8) Prereq., consent of department and Internship Services office. Practical application of classroom learning in off-campus placements. Level: Graduate

### **HSTA 599 - Professional Paper. 1-6 Credits.**

(R-6) Preparation of a professional paper appropriate to the needs and objectives of the individual student.  
Level: Graduate

### **HSTA 699 - Thesis/Dissertation. 1-6 Credits.**

(R-6) Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## History: World (HSTR)

### **HSTR 101H - Western Civilization I. 4.000 Credits.**

(EU) Offered autumn. A comprehensive, introductory history of western civilization from classical antiquity to 1648. Lecture-discussion. Credit not allowed for both 101H and 103H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTR 102H - Western Civilization II. 4.000 Credits.**

(EU) Offered spring. A comprehensive, introductory history of western civilization from 1648 to the present. Lecture-discussion. Credit not allowed for both HSTR 102H and 104H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTR 103H - Honors Western Civilization I. 4 Credits.**

(EU) Offered autumn. A comprehensive, introductory history of western civilization from classical antiquity to 1648. Lecture-honors discussion. Credit not allowed for both 103H and 101H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTR 104H - Honors Western Civilization II. 4 Credits.**

(EU) Offered spring. A comprehensive introductory history of western civilization from 1648 to the present. Lecture-honors discussion. Credit not allowed for both HSTR 102H and 104H.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **HSTR 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTR 198 - Cooperative Education/Internship I. 1-6 Credits.**

Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HSTR 200 - Intro: Historical Methods. 1 Credit.**

Offered autumn and spring. Enrollment limited to history majors or by consent of the instructor. This course introduces students to the practice of history and prepares them for upper-division courses in the field. Students will learn to critically read secondary sources, research in primary sources, analyze documents, and write clear and convincing historical essays. This course is required for recently declared history majors and minors. Students should take it before taking upper-division history courses.

### **HSTR 210E - History of the Bible. 3 Credits.**

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(WRLD) Offered Intermittently. This course explores the history of the peoples, places, ideas, and texts that combined over hundreds of years to produce the Bible as a single book, and examines the influence of this book on the development of Western thought and culture. The course offers an introduction to the Hebrew Bible / Old Testament and the ancient world of its authors from literary, historical, social, anthropological, and archaeological perspectives.

Gen Ed Attributes: Ethical Human Values Course (E), Lit & Artistic Studies (L)

### **HSTR 211L - Early Christianity. 3 Credits.**

(WRLD) Offered Intermittently. This course offers an introduction to the history, literature and religion of earliest Christianity. The course offers an introduction to the New Testament and the ancient world of its authors from literary, historical, social, and archaeological perspectives.

Gen Ed Attributes: Lit & Artistic Studies (L), Ethical Human Values Course

### **HSTR 221H - God- Past, Puzzle, Present. 3 Credits.**

(WRLD) Offered intermittently. This class explores the idea of God across time and space from antiquity through the present. In particular, students will examine how forces of history have shaped notions of divinity and examine how those ideas and the institutions and practices they inspire have in turn shaped historical events. At the root of the semester's exploration is the puzzle of why immanent, earthly beings have for so long been drawn to the ethereal and transcendent and how that attraction has changed over time. Includes one observation of a community religious service.

Gen Ed Attributes: Historical Studies

### **HSTR 230H - Colonial Latin America. 3 Credits.**

(WRLD) Latin America from conquest by Spain and Portugal to wars for independence. Focus on social relations, imperial and local politics, hegemony, resistance, and change.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **HSTR 231H - Modern Latin America. 3 Credits.**

(WRLD) Offered spring. Latin America from wars of independence to the present. Focus on social relations, development models, politics, and popular movements.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **HSTR 240H - East Asian Civilizations. 3 Credits.**

(WRLD) Offered autumn. An interdisciplinary, pluralist, and exploratory introduction to civilizations of East Asia. Primary focus on China, Japan, and Korea, the relations among them and their patterns of interaction with the outside world in pre-modern and modern periods.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **HSTR 262H - Islamic Civilization: Classical Age. 3 Credits.**

(WRLD) A concise history of the Islamic world from the 6th century to the fall of the Abbasid Empire in the 13th century, focusing primarily on the teachings of Islam and the causes for the rapid expansion of the Islamic empire.

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Gen Ed Attributes: Historical Studies

### **HSTR 264H - Islamic Civilization: Modern Era. 3 Credits.**

(WRLD) A concise history of the Islamic world from the 13th century to present.

Gen Ed Attributes: Historical Studies

### **HSTR 272E - Terrorism: Violence in the Modern World. 3 Credits.**

(WRLD) The rise and spread of terrorism in the modern world, from the French Revolution to the present.

Gen Ed Attributes: Ethical & Human Values Course

### **HSTR 291 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTR 291H - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Gen Ed Attributes: Historical Studies

### **HSTR 300 - Writing For History. 3 Credits.**

Prereq., WRIT 101 (or higher) or equivalent. Students will learn the fundamentals of writing history through study of a topic that will change according to the expertise of the instructor of record. Through a multi-drafting writing process students will hone their research skills, learn how to craft interpretive theses, develop outlines, and gain experience in drafting and re-drafting their written work. Students will also learn how to compose strong prose, organize historical arguments, and manage the mechanics of proper citation.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTR 301 - Ancient Greek Social History. 3 Credits.**

(EU) Various aspects of personal, social, and political life of classical times in Greece. Primary readings in various ancient authors supplemented by some audio-visual or other informational presentations.

### **HSTR 302H - Ancient Greece. 3 Credits.**

(EU) Greek history from the earliest times through the Macedonian ascendancy, based on the writings of the Greek historians.

Gen Ed Attributes: Historical Studies

### **HSTR 303 - Alexander the Great. 3 Credits.**

(EU) Offered Intermittently. Greek history from the rise of Macedon to the Roman conquest (c. 360 - 30, BCE). Focuses primarily on the historical context, life, and legacy of Alexander III (the Great).

### **HSTR 304H - Ancient Rome. 3 Credits.**

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(EU) Roman history from the time of the Kings through the early Empire. Based on the writings of the Roman historians.

Gen Ed Attributes: Historical Studies

### **HSTR 309 - The First Historians. 3 Credits.**

(WRLD) Offered Intermittently. This course explores the ways in which history was thought about, understood, and written in the ancient world. The course surveys a diverse selection of historiographic sources from the ancient Near East, Mediterranean and North Africa, from prehistory and the beginnings of writing in Mesopotamia to the historians of Greco-Roman Judea and Christendom.

### **HSTR 312 - Age of Absolutism 1648-1789. 3 Credits.**

(EU) The political, economic, intellectual, and social development of Europe 1648-1789.

### **HSTR 313 - Religion and Violence. 3 Credits.**

(WRLD) Offered Intermittently. This course explores the phenomenon of violence in the history of religion. Topics include: prehistoric religion and warfare; conflict myths and the divine warrior; holy war; monotheism and iconoclasm; sacrifice; curses and magic spells; witchcraft accusations; sectarianism; apocalypticism; martyrdom.

### **HSTR 314 - Origins of Western Religion. 3 Credits.**

(WRLD) Offered Intermittently. This course explores the beginnings of biblical religions and the early history and literature of Judaism and Christianity. Topics include: the emergence of Judaism and Christianity in the Persian, Greek, and Roman empires; religions of the ancient Middle East and Mediterranean; stories of Jewish and Christian origins; the historical Jesus; the early rabbinic movement; Paul between Judaism and Christianity; the Dead Sea Scrolls.

### **HSTR 315 - Reformation. 3 Credits.**

(EU) This course covers Europe's "long Reformation," beginning with efforts toward reform in late medieval Latin Christendom, discussing Luther, Calvin, and other major reformers and movements, popular religion, witchcraft, the age of religious wars, and the legacy of reformation, continuing into contemporary society.

### **HSTR 319 - Prophets and Prophecy. 3 Credits.**

(WRLD) Offered Intermittently. This course explores the phenomenon of prophecy in history, society, and literature. It focuses on literature by and about prophets in biblical antiquity and on the political roles of prophets in ancient societies. The course surveys the history of prophecy from a variety of perspectives and disciplines including anthropology, sociology, archaeology, literary studies, and comparative religion.

### **HSTR 323 - European Social and Intellectual History: The 19th Century. 3 Credits.**

(EU) Romanticism, Realism, and the Avant-Garde against the historical background of the Industrial Revolution and urbanization.

### **HSTR 325 - European Social and Intellectual History: The 20th Century. 3 Credits.**

(EU) The triumph of the Avant-Garde and the decline of traditional culture: 1914-1945.

### **HSTR 326 - Contemporary Europe. 3 Credits.**

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(EU) European politics, culture, and society since 1945.

### **HSTR 334 - Latin America: Reform & Revolution. 3 Credits.**

(WRLD) Prereq., WRIT 101 (or higher) or equivalent. Different ideologies and projects in Latin America aimed at gradual or radical transformation of political systems and/or socio-economic relations. From the Haitian Revolution to the Bolivarian vision of Hugo Chavez.

Gen Ed Attributes: Writing Course-Intermediate

### **HSTR 335 - Latin America: Workers & Labor. 3 Credits.**

(WRLD) Study of the experiences and agency of diverse working people in Latin America. Influence of race, ethnicity, gender, religion, and generation on working class identity and movements. Labor organizations and politics in historic context.

### **HSTR 337 - Capitalism in Latin America. 3 Credits.**

(WRLD) Offered intermittently. A study of Latin America's significant role in the origins and trajectory of global capitalism, and the effects of capitalism on Latin American politics, social relations, culture, and the environment. Includes perspectives from capitalism's champions and its critics.

### **HSTR 338 - Democracy in Latin America. 3 Credits.**

(WRLD) Offered intermittently. Explores the struggles of Latin American countries to establish and maintain democratic forms of governance from the late 18th to the 21st century. Looks at challenges to elite-dominated notions of political democracy by groups calling for greater racial, gender, and economic inclusion and justice.

### **HSTR 348 - Britain 1485-1688. 3 Credits.**

(EU) Social, political, religious, and intellectual history of the British peoples during the tumultuous period of reformation, exploration, constitutional crisis, and civil war.

### **HSTR 349 - Britain from Revolution to Reform 1688. 3 Credits.**

(EU) The social, political, cultural, and intellectual consequences of British expansion, financial and industrial revolutions, and revolutionary movements.

### **HSTR 350 - Modern Britain. 3 Credits.**

(EU) Social, political, intellectual, and cultural history of the United Kingdom from an age of industry, empire, and political reform to one of economic decline and international retreat.

### **HSTR 351 - Democracy: Ancient to Modern. 3 Credits.**

(EU) Offered Intermittently. During the 6th century BCE, the Greeks developed a new form of government that they called demokratia (literally, rule by the people), whose defining characteristics were equality among and meaningful political participation by all citizens, regardless of their socio-economic status. In this course, we will conduct an in-depth exploration of this historically distinctive form of government. We will also compare Greek democracies to subsequent institutions that have been described as democratic; examine the impact of Greek democracy on the development of modern political thought; and use our



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knowledge of Greek political history to reflect on issues of contemporary importance, such as the relationship between democracy per se and other normative goals that we often conflate with democracy (e.g., liberty, equality, and toleration).

### **HSTR 352 - France Revolution 1789-1848. 3 Credits.**

(EU) Political, economic, and social upheaval and development.

### **HSTR 353 - Modern France. 3 Credits.**

(EU) Political, economic, and social development.

### **HSTR 354 - Italy: 1300-1800. 3 Credits.**

(EU) The emergence of the Italian states with an emphasis on cultural achievements in the late Medieval, Renaissance, Baroque, and Neoclassical periods.

### **HSTR 355 - Italy: 1800-Present. 3 Credits.**

(EU) The emergence of a united Italy, the triumph of fascism and contemporary Italian society.

### **HSTR 357 - Russia to 1881. 3 Credits.**

(EU) Emphasis on the autocratic political tradition, Westernization, and territorial expansion.

### **HSTR 358 - Russia Since 1881. 3 Credits.**

(EU) Emphasis on modernization and the revolutionary movement; the Bolshevik Revolution and Stalinist era; the decline of Soviet system.

### **HSTR 361 - Germany: Augsburg-Bismarck. 3 Credits.**

(EU) Political, economic and social development of the states of the Holy Roman Empire from 1555-1866.

### **HSTR 363 - Eastern Europe. 3 Credits.**

(EU) Main currents in the history of Eastern Europe from earliest times to the present. Focus on the lands of Poland, Bohemia, Hungary, and the Balkan region.

### **HSTR 364 - Environmental History. 3 Credits.**

(AM) A history of the human-nature interaction in the United States.

### **HSTR 368 - Iran Between Two Revolutions. 3 Credits.**

(WRLD) The several intellectual traditions and philosophies some ephemeral and visionary, most eclectic and confused, and virtually all conflicting that are usually believed to underlie the varying concept of Iranian and Arab nationalism in the 20th century.

### **HSTR 369 - 20th Century American West. 3 Credits.**

(AM) The contemporary trans-Mississippi West.

### **HSTR 370 - Practicing Oral History. 3 Credits.**

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Offered Intermittently. Learn a vital skill in public history--how to design, conduct, interpret, and present oral interviews. Students will use best practices in oral history to conduct interviews in the community, and will contribute these interviews to archives and online forums. Students may need to use their own phones or recording devices.

### **HSTR 377 - European Internal Relations. 3 Credits.**

(EU) The nature, evolution, and functions of the European diplomatic system from the Ancient World to 1870.

### **HSTR 386 - Nationalism and the Modern Middle East. 3 Credits.**

(WRLD) The socioeconomic, political, and cultural causes which resulted in the transformation of the Iranian society from a traditional Islamic entity to a modern secular state and the factors which led to the downfall of the secular state and the establishment of an Islamic republic.

### **HSTR 391 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTR 392 - Independent Study. 1-12 Credits.**

(R-12)

### **HSTR 394 - Seminar. 1-6 Credits.**

(R-6) A review and discussion of current research. Topics vary.

### **HSTR 396 - Independent Study. 1-12 Credits.**

(R-12) Course material appropriate to the needs and objectives of the individual student.

### **HSTR 398 - Public History Internship. 1-6 Credits.**

(R-12) Offered autumn, spring, and summer. Prereq., prior approval must be obtained from the History Department Internship Coordinator and the Experiential Learning and Career Success office. The public history internship program in History is designed to provide experiential learning opportunities for students in public or private agencies, including museums, libraries, schools, and government agencies. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HSTR 400 - Historical Research Seminar. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200 and enrollment for history majors and minors, graduate students in history, or by consent of the instructor. Topics vary according to the instructor. The goal of this course is for students to propose and execute a substantial research project. Upper division writing course for the history major.

Gen Ed Attributes: Writing Course-Advanced

### **HSTR 401 - The Great Historians. 3 Credits.**

(EU) Prereq., WRIT 101 (or higher) or equivalent. The history and philosophy of history.

Gen Ed Attributes: Writing Course-Intermediate

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### **HSTR 418 - Britain 1500 - 1800. 3 Credits.**

(EU) Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200, enrollment for history majors and minors, graduate students in history, or by consent of the instructor. Recommended HSTR 348 or 349. Students will discuss specific issues in the historiography of the early modern period in British history (c1500-1800) and produce research papers grounded in primary sources.

Gen Ed Attributes: Writing Course-Advanced

### **HSTR 435 - Latin American Human Rights & Memory. 3 Credits.**

(WRLD) The legacy of state violence and ongoing struggles for truth and justice in select Latin American case studies. Different uses of memory and narration in bearing witness to social and political conflict and human rights violations.

### **HSTR 437 - US-Latin America Relations. 3 Credits.**

(WRLD) Prereq., WRIT 101 or equivalent, and one intermediate writing course, HSTR 200 and enrollment for history majors and minors, graduate students in history, or by consent of the instructor. Research and writing seminar on U.S.-Latin American relations from the late 18th century through the 20th century.

Gen Ed Attributes: Writing Course-Advanced

### **HSTR 441 - Islam and the West. 3 Credits.**

(WRLD) Advanced analysis of the historical and contemporary issues involving the human communities, cultures, and economies in Central and Southwest Asia.

### **HSTR 442 - Cities and Landscapes of Central Asia. 3 Credits.**

(WRLD) Same as ANTY 442. Analysis of the main centers of civilization and culture, rich sites and monuments of Central Asia and Southwest Asia since ancient times.

### **HSTR 448 - Tradition & Reform in China. 3 Credits.**

(WRLD) A history of key reform movements from the mid-19th century (when China was rocked by rebellion and the entry of the West) to the Maoist period.

### **HSTR 459 - Artistic Traditions of Central & SW Asia. 3 Credits.**

(WRLD) Analysis of the study of human artistic creativity and scientific innovations of various cultures in Central and Southwest Asia since ancient times.

### **HSTR 491 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **HSTR 492 - Independent Study. 1-12 Credits.**

(R-12) Prereq., consent of instr.

### **HSTR 494 - Seminar. 1-6 Credits.**

(R-6) Prereq., consent of instr. A review and discussion of current research. Topics vary.

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### **HSTR 495 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **HSTR 500 - History Pedagogy. 1 Credit.**

(R-4) This course prepares graduate students to teach undergraduate courses in history. Level: Graduate

### **HSTR 501 - Readings in Early Modern History. 3 Credits.**

(R-6) A graduate readings seminar designed to acquaint students with European historiography. The chronological, geographic, or thematic focus of the course may vary, depending on the instructor. Level: Graduate

### **HSTR 502 - Readings in Modern European History. 3 Credits.**

(R-6) A graduate readings seminar designed to acquaint students with the historiography of modern Europe. The chronological, geographic, or thematic focus of the course may vary, depending on the instructor. Level: Graduate

### **HSTR 516 - Modern Europe. 3 Credits.**

Intensive reading in 19th and 20th century European history. Level: Graduate

### **HSTR 540 - European Culture & Intellect. 3 Credits.**

Intensive reading. Level: Graduate

### **HSTR 585 - Latin America. 3 Credits.**

Intensive reading in Colonial and Modern Latin American history. Level: Graduate

### **HSTR 594 - Seminar. 1-12 Credits.**

(R-12) Prereq., 27 credits in history. Directed research. Level: Graduate

### **HSTR 595 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **HSTR 596 - Independent Study. 1-12 Credits.**

(R-12) Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **HSTR 597 - Research in History. 1-9 Credits.**

(R-9) Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **HSTR 598 - Internship. 1-8 Credits.**

(R-8) Prereq., consent of department and Internship Services office. Practical application of classroom learning in off-campus placements. Level: Graduate

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### **HSTR 599 - Professional Paper. 1-6 Credits.**

(R-6) Preparation of a professional paper appropriate to the needs and objectives of the individual student.  
Level: Graduate

### **HSTR 696 - Independent Study. 1-12 Credits.**

### **HSTR 699 - Thesis/Dissertation. 1-9 Credits.**

(R-6) Preparation of a thesis or manuscript based on research for presentation and/or publication. Level:  
Graduate

## Honors (HONR)

### **HONR 120 - Introduction to Honors. 1 Credit.**

Offered autumn. Interdisciplinary offerings by various faculty. Orientation to practical and theoretical issues facing students entering college.

### **HONR 121L - Ways of Knowing. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent. A critical assessment of contrasting epistemological stances expressed in various views of the divine, nature, society and the self.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate

### **HONR 122E - Ways of Knowing II. 3 Credits.**

Offered spring. Prereq., HONR 121L or LSH 151L or LSH 152L. This course traces the major Western ethical traditions, examines the influence of those traditions in normative political theory, and provides dramatic illustrations of the moral life.

Gen Ed Attributes: Ethical & Human Values Course, Democracy and Citizenship (Y)

### **HONR 190 - Supervised Research and Creative Scholarship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr.

### **HONR 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **HONR 192 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HONR 194 - Seminar. 1-6 Credits.**

(R-6) A review and discussion of current research. Topics vary.

### **HONR 198 - Internship. 1-6 Credits.**

Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HONR 270 - Service Learning Seminar. 2 Credits.**

This service learning course provides students with an in-depth, week-long community service experience in the West. Students participate in a seminar class prior to service and learn through active reflection and discussion. Students will explore aspects of citizenship and civic responsibility for addressing and solving social problems. Students explore aspects of citizenship and civic responsibility to address and solve social problems.

### **HONR 272 - Leadership for Social Change. 3 Credits.**

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Offered spring. This service-learning course provides students with a broad overview of the social change model of leadership development through engagement with campus and community organizations. Students will examine a variety of leadership models, analyze their own capacity for ethical leadership, and develop a personal leadership philosophy and social change plan based on individual values.

### **HONR 274 - Advocate Leadership Seminar. 2 Credits.**

Offered spring. Prereq., Consent of instr. Members of the university's Advocates are given responsibilities and opportunities generally reserved for paid professionals. This course teaches requisite leadership competencies, skills and articulation. Advocates develop situational decision-making and will be assessed through traditional letter grade and interactive skill evaluation.

### **HONR 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **HONR 298 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HONR 320E - Art of Inquiry: Research and Capstone Seminar. 3 Credits.**

Offered autumn and spring. Designed to assist undergraduate students with their independent research projects. This seminar enables students conducting research in separate disciplines to apply the intellectual strategies and to explore the ethical concerns common to research in most disciplines.

Gen Ed Attributes: Ethical & Human Values Course

### **HONR 370 - Pre-Law Seminar. 1 Credit.**

Offered spring or autumn. This course gives students specific information about the law school application process, the life of a law student, and various careers in the law. Students will have unique opportunities to interact with legal professionals and law school admission officers to explore their futures in law school and the legal profession.

### **HONR 372 - Global Health Issues. 2 Credits.**

Offered spring. This course examines the social, cultural, and political aspects of global health issues. Stressing principles of intercultural communication, we will examine the key determinants of public health in developing nations. We will enhance our understanding of the global dimensions of health and disease, the relative effectiveness of various health care initiatives, and the short- and long-term outcomes of diseases and health care interventions.

### **HONR 390 - Supervised Research and Creative Scholarship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr.

### **HONR 391 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **HONR 392 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HONR 394 - Honors Seminar. 1-6 Credits.**

(R-6) A review and discussion of current research. Topics vary.

### **HONR 398 - Internship. 1-6 Credits.**

Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HONR 491 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **HONR 492 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HONR 494 - Senior Seminar. 1-6 Credits.**

(R-6) A review and discussion of current research. Topics vary.

### **HONR 495 - Practicum. 1-6 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **HONR 498 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **HONR 499 - Honors Thesis/Project. 1-9 Credits.**

(R-9) Prereq., consent of thesis/project director and dean of Honors College. Preparation of a thesis or manuscript based on research for presentation and/or publication.



## Hospitality, Tourism, & Rec. (HTR)

### **HTR 107 - Introduction to Hospitality Management. 3 Credits.**

Offered autumn. Offered at Missoula College. This course introduces students with an overview of the businesses in the hospitality industry, including hotel/lodging, restaurant, and travel/tourism. The course provides the history, present factors, and future trends that will affect the hospitality industry, as well as introductory practices in marketing, operations, economics, technology, and customer service.

### **HTR 201 - Hotel Management and Operations. 3 Credits.**

Offered spring. Offered at Missoula College. This course introduces students to the different management responsibilities within hotel and lodging operations. Students receive instruction on the responsibilities and requirements of management in the areas of front desk management, security/maintenance, housekeeping, administration, and food/beverage.

### **HTR 298 - Internship. 4 Credits.**

Offered at Missoula College. This course provides students with the opportunity to gain practical experience in the hospitality industry. Students will secure a position in one of the areas of the hospitality industry and work at least 180 hours. Students will also gain knowledge in how to properly and effectively prepare a resume, cover letter, and for a job interview. The internship will culminate in a portfolio of their accomplishments as well as a paper detailing the knowledge gained from the experience in reference to their job outcomes and goals.

## Human and Family Development (HFD)

**HFD 099 - Developmental. 1-99.99 Credits.**

**HFD 199 - Lower-Division Elective. 1-99.99 Credits.**

**HFD 298 - Internship. 1-4 Credits.**

(R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

**HFD 398 - Internship. 1-4 Credits.**

(R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

**HFD 399 - Upper-Division Elective. 1-99.99 Credits.**

**HFD 490 - Practicum in Human Development. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., 12 credits in HFD. Supervised fieldwork in settings relevant to developmental topics, including school classrooms; child/family welfare agencies; various institutions and programs for children, juveniles, or the aged.

**HFD 494 - Seminar in Human Development. 1-3 Credits.**

(R-3) Offered autumn. Discussion of selected problems in human development. Emphasis on integrating theory and practice.

**HFD 495 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

**HFD 498 - Internship. 1-4 Credits.**

(R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Students may take this course at any time after declaring the minor.

## Information Technology Systems (ITS)

### **ITS 150 - CCNA 1: Exploration. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Introduction to networking field including terminology; protocols; local-area and wide-area networks; the OSI model; topologies; IP addressing; cabling and cabling tools; routers and router programming. Ethernet and network standards; and wireless technologies.

### **ITS 152 - CCNA 2: Exploration. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., ITS 150. Covers router theory and technologies including configurations, IOS software management, routine protocol configuration, TCP/IP, access-lists and introduction to LAN switching.

### **ITS 165 - Introduction to Operating Systems and the Command Line. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq.: M 090 or consent of instructor. Introduction to operating system concepts through the use of contemporary software. Emphasizes interaction with the operating system through the command interpreter and shell-type scripts. Will explore multiple operating systems through a variety of modalities including virtual operating systems.

### **ITS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **ITS 210 - Network OS - Desktop. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., ITS 150. This class provides in-depth study of a secure, multi-user, client-based network operating system. Topics include installation, administration of resources, performance, network services, and security.

### **ITS 212 - Network OS - Server Administration. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., ITS 150 or instructor consent. This course covers server technologies commonly used in local area networking. Topics include installation, administration, storage, application services, network services, security, reliability, and availability.

### **ITS 214 - Network OS - Infrastructure. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., ITS 212. Principles and implementation of enterprise networking services. Topics include Protocol Binding, DNS, DHCP, WINS, Remote Access, IP Routing, IP Security, Network Address Translation, and Certificate Services.

### **ITS 221 - Project Management. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CSCI 172. Investigation of topics in project management including scope, definition, risk, procurement and the RFP., management of time, cost, quality, and human resources. Concepts are reinforced with PM software.

### **ITS 222 - Enterprise Security. 3 Credits.**

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Offered spring. Prereq., ITS 212 or Consent of Instructor. Examination of general information technology security concepts. Topics include access control, authentication, attack methods, remote access, web security, wireless networks, cryptography, internal infrastructure security, and external attacks. Security procedures, organizational policies, risk management and disaster recovery addressed.

### **ITS 250 - CCNA 3: Exploration. 3 Credits.**

Offered spring (first half). Offered at Missoula College. Prereq., ITS 152. Covers router configurations including advanced IP addressing techniques, variable length subnet masking, intermediate routing protocols, Ethernet switching, virtual LANs, spanning-tree protocol, and VLAN trunking protocol.

### **ITS 252 - CCNA 4: Exploration. 3 Credits.**

Offered (second half). Offered at Missoula College. Prereq., ITS 152. Project-based course in wide-area networking including advanced IP addressing techniques, network address translation, port address translation, DHCP, WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management, and introduction to optical networking.

### **ITS 271 - Securing Desktop/Mobile Development. 4 Credits.**

Offered at Missoula College. Course provides advanced technical information and relevant skills to successfully secure end-user devices, including desktop and laptop systems, tablets, cellular phones, and other portable computing equipment. Building on existing knowledge and skills in the areas of server management, network management, and security, students will gain mastery-level knowledge of security issues and best practices. Course content covers client/server exposures and protections (authentication options, packet signing and encryption of network traffic, appropriate implementation of permissions and rights); malware threats and treatments; transmission choices and precautions (wired, wireless, remote desktop access, virtual private networking (VPN)); cloud computing considerations; and corporate mobile device best practices. Hardening of the operating system and application software is also covered. Course content will focus on business-focused security practices to prepare students for Security+, CISSP, and Security Pro industry certifications.

### **ITS 273 - Securing Networks. 4 Credits.**

Offered at Missoula College. Course provides advanced technical information and relevant skills to secure servers and business information. Building on existing knowledge and skills in the areas of server management, network management, and security, students will gain mastery-level knowledge of security issues and best practices. Students will examine and apply hardening techniques to operating systems and infrastructure-based applications. Strategies to ensure business continuity and data security are emphasized, including policy, data preservation, disaster preparedness, and disaster recovery. Legal guidelines and requirements, both domestic and international, are examined in the context of responsible and ethical computer use. Course content will focus on business-focused security practices to prepare students for the Security+, CISSP, and Security Pro industry certifications.

### **ITS 274 - Ethical Hacking and Network Defense. 3 Credits.**

Prereq., ITS 152 and ITS 212 or consent of Instructor. This Course will provide students the skills to analyze and defend network and computer resources. The course will combine knowledge and skills from programming, networking, and operating systems and leverage those skills for enumerating and securing networks. An emphasis is placed on scenario-based and exploratory learning.

### **ITS 275 - Border/Perimeter Network Security. 4 Credits.**

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Offered at Missoula College. Course provides advanced technical information and relevant skills to successfully secure computer networks at the public/private interface. Material focuses on hardware- and software-based techniques to prevent and monitor unauthorized or malicious access to corporate networks and servers. Building on existing knowledge of border and perimeter security, students will develop and implement best practices guidelines for boundary-related devices and software. Students will establish baseline assessments of network security from public access points and identify known and/or potential security vulnerabilities. Course content will focus on business-focused security practices to prepare students for the Security+, CISSP, and Security Pro industry certifications.

### **ITS 277 - Software Assurance and File Systems. 4 Credits.**

Offered at Missoula College. Course provides advanced technical information and relevant skills to methodically secure software, including operating systems, custom application software, and commercially-available packages. Students will classify application software (including, but not limited to customer-facing, employee/partner, mobile/endpoint, database, and cloud-based), and perform risk analyses and common weakness assessments against these programs. Students will research various commercial, professional, and governmental security organizations and create a personalized repository of security-related checklists, toolkits, reference material, and resources. Students will investigate low-level file system structures such as master file tables, allocation tables, free space tables, file table entries, and metadata fields. Using common file signatures and checksums, students will verify internal content against external and metadata indicators. Students will examine 'hidden' disk space areas, including file, volume, and/or partition slack. Course content will focus on business-focused security practices to prepare students for Security+, CISSP, and Security Pro industry certifications.

### **ITS 279 - Cloud Systems. 3 Credits.**

Offered Spring. Offered at Missoula College. Prereq., ITS 210. This course will introduce the student to the creation, use, and administration of cloud-based resources. The course will survey cloud terminology and concepts, examine use-cases and models, examine oversight and security concerns, and consider financial implications and governance. The student will engage in creation, use, and administration of cloud services as well as exploration of virtualization resources.

### **ITS 280 - Computer Repair & Maintenance. 3 Credits.**

Offered spring. Offered at Missoula College. This course provides an in-depth study of personal computer hardware with focus on field replaceable units (FRU's). Topics include: system boards, processors, storage devices, I/O ports, cabling, power supplies, multimedia devices, printers, and troubleshooting.

### **ITS 289 - Professional Certification. 1 Credit.**

(R-4) Offered autumn and spring. Offered at Missoula College. Prereq., consent of instr. Review objectives of an information technology industry-based professional certification. A thorough review of certification objective, preparation strategies, and exam strategies will be covered. Course can be repeated for different industry-based professional certifications.

### **ITS 290 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered at Missoula College. Consent of instructor required. Independent research under the direction of a faculty member. Graded credit/no credit.

### **ITS 291 - Special Topics. 1-6 Credits.**

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(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **ITS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Prereq., consent of instr.

### **ITS 294 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College.

### **ITS 297 - Undergraduate Research. 1-10 Credits.**

Offered intermittently. Offered at Missoula College. Preq. consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

### **ITS 298 - Internship/Cooperative Education. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Not open to non-majors. On-the-job training in positions requiring advanced computer competencies. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of six hours each week at an approved site and attend a scheduled one-hour seminar. Offered for CR/NCR grading only.

## International Development Studies (IDS)

### **IDS 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **IDS 398 - IDS Internship. 1-6 Credits.**

(R-6) Offered every term. Consent of instructor required. Special internships under instructor supervision offering practical experience.

### **IDS 490 - Research. 3 Credits.**

This course is designed to enhance the participants' understanding of important methods used in the evaluation of international development programs. The toolkit of a student completing this course will include knowledge of basic methods and standard systems used worldwide for conducting such evaluations. You will learn how to design, conduct, report on and orally present your findings as if you are speaking to a group of donors, project planners or other stakeholders.

### **IDS 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **IDS 497 - Methods. 1-6 Credits.**

Course is designed to enhance the participants' understanding of important methods used in the evaluation of international development programs. The toolkit of a student completing this course will include knowledge of basic methods and standard systems used worldwide for conducting such evaluations. You will learn how to design, conduct, report on and orally present your findings as if you are speaking to a group of donors, project planners or other stakeholders. You will study how to derive important monitoring and evaluation questions from existing literature, how to aim for specific professional outcomes such as the generation of a professional talk, poster, or paper, and the steps required along the way to get you to those outcomes. Survey design, identification and definition of critical M&E variables, predicting required analyses of those variables, LogFrame, Social Frameworks, and CapacityWORKS will be taught in this class.

### **IDS 591 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## Irish (IRSH) < University of Montana

### Irish (IRSH)

#### **IRSH 101 - Elementary Irish. 4 Credits.**

Offered autumn or spring. This course represents an introduction to modern Irish in both its spoken and written forms: basic principles of grammar and sentence structure are covered. Emphasis is placed on the application of these principles in every-day situations. This course is housed in the English Department. The GenEd Foreign Language can be fulfilled by successfully completing IRSH 101 and IRSH 102.

#### **IRSH 102 - Elementary Irish II. 4 Credits.**

Offered autumn or spring. The primary objective of this course is to build on the foundations laid in Elementary Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. Students will also learn more songs and poems from the Irish tradition and thus increase their idiomatic and syntactical knowledge of the language. This course is housed in the English Department. The GenEd Foreign Language requirement can be fulfilled by successful completion of 102.

#### **IRSH 103 - Elementary Irish III. 3 Credits.**

Offered autumn or spring. Same as IRSH 103. The primary objective of this course is to build on the foundations laid in Beginning Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103.

#### **IRSH 201 - Intermediate Irish I. 4 Credits.**

Offered spring semester. Students will continue their study of the verbs; engage more complex syntax and grammatical constructions; and consult the prose and poetry of the written and oral literary traditions. For proficiency equal to the 202-level, students must take the three semester sequence (101, 102, 201, & 202) of Irish language study.

#### **IRSH 202 - Intermediate Irish II. 4 Credits.**

Offered fall semester. Prereq. IRSH 201 or its equivalent from another university. Students will expand their knowledge of Irish language verbs: they will study the five declensions of the nouns; and acquire the vocabulary and language necessary to engage more abstract ideas and topical issues on an intellectual level. For proficiency equal to the 202-level, students must take the four semester sequence (101, 102, 201, & 202) of Irish language study.

#### **IRSH 249 - The Irish. 3 Credits.**

#### **IRSH 250 - An Introduction to Irish Gaelic Literature. 3 Credits.**

Offered every other autumn. This course will introduce students to the riches and delights of the literary tradition of Gaelic Ireland from the earliest times down to the Great Famine. Consulting texts in translation, students will read stories from the Heroic Literature of Ireland; they will learn of the impact of Christianity, the Viking Raids, the Norman invasion and the Tudor conquest on the canons of Irish literature.



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### **IRSH 255 - From Warrior Training to National Sport: a History of Hurling. 3 Credits.**

Offered every other spring. Unlike most modern sports, the Irish game of hurling is a very ancient game, going back, some scholars suspect over 3,000 years. This course will examine the history of the game; its place in the literature of Ireland; and role of hurling clubs in the creation of young rebels who would go out to fight for Irish freedom. This course will be of particular interest to students at UM as the UM hurling team has won four out of the past five USA national championships.

### **IRSH 265 - From Bulls to Bullets: the Course of Irish History. 3 Credits.**

Offered every other spring. This course surveys the history of Ireland and the Irish, from the enduring myths and legends of the island's first inhabitants where the potent social and political representation of the Bull was used to demonstrate power, to the bullets and bombs that defined the lives of many in the northern part of the country in the twentieth century. Like any place, Ireland has a complicated and complex history, where many different groups coalesced and divided along social, economic and political grounds.

### **IRSH 291 - Special Topics. 1-4 Credits.**

### **IRSH 292 - Independent Study. 1-3 Credits.**

### **IRSH 345L - Literature in the Irish Lang. 3 Credits.**

Offered intermittently. This course acknowledges Irish as the oldest documented vernacular in Europe and its literature as a voice that is over 1500 years old. Examines the literary response of Gaelic Ireland to invasion, conquest, and colonization as articulated by its literature.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **IRSH 350 - The Literature of pre-Norman Ireland. 3 Credits.**

Offered every other autumn. The objective of this course is to locate and examine Irish Gaelic literature of the pre-Norman period in the context of the native tradition and universal Church literature, to explore the ways in which the monks redacted ancient tales to achieve consensus for the new dispensation, and to analyze the impact of Christian culture on the canons of Irish literature.

### **IRSH 355 - The Politics of Culture: Irish America, the Gaelic Revival, and the Easter Rising. 3 Credits.**

Offered every other spring. This course will examine the origins and formulation of this new vision, the Gaelic revival in Ireland and America, and at the role of Irish America in the formation of modern Irish identity and the achievement of an independent Irish republic.

### **IRSH 360 - Irish/N Irish Literature. 3 Credits.**

Offered intermittently. Examines (in English) selection of fiction, poetry, drama, film, and music from the Irish and/or Northern Irish literary traditions. Students will seek to understand how artists respond to the burdens of history, identity, and political conflict, and how they articulate the possibilities afforded by Ireland's changing position in the world.

### **IRSH 365 - Ireland and America in the Age of Enlightenment and Revolution. 3 Credits.**

Offered every other autumn. A number of ideas, circumstances and events tended to unite individuals and groups in eighteenth-century Ireland with colonists in British North America. This course examines the connections and events that shaped these opinions. The course begins by looking at the 'Atlantic world?

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which brought people in Ireland, Britain and America closer through trade and emigration.

### **IRSH 370 - The Irish Conflict: 1968-1998. 3 Credits.**

Offered every other autumn. This course examines the evolution, nature and context of the chronic civil and political unrest that erupted in the North of Ireland in 1968. When a civil rights movement aimed at securing such modest demands as 'one man, one vote' met with vehement state resistance, Ireland was pitched into the most sustained political violence in post-World War Two Western Europe. The longest deployment of the British Army in history failed to contain the most sophisticated insurgency ever known. O'Donnell will identify and explain the major political forces in play; not least the agendas of all major combatants. Account will be taken of the international dimension of the 'Long War?', including the role of both private and state actors in the USA. Students of this course will receive a comprehensive overview of an inter-generational conflict from its inception to the seismic Good Friday Agreement of 1998 which resulted in all major forces adopting purely political modes of contest. Printed primary, manuscript and online resources will be utilized on a case study basis. Subthemes include political propaganda; tactics and strategy of the Irish Republican Army; hungerstriking; counterinsurgency; 'The Dirty War?'; justice and the law and 'peace processes?'. On completion students will be well situated to pursue high level courses in programmes concerned with political science; military studies and jurisprudence.

### **IRSH 375 - The Irish and their Language. 3 Credits.**

Offered every other spring. This course will examine the fortunes of the language from the earliest records to the present day. Students will consult the native record as well as the writings of the English invader. Their study will include an examination of the language and the worldview it presented - a worldview at variance with that of the English. They will learn about the role of the Irish of America in the movement to preserve and revive the language; and they will come to understand how the language we use not only unites us as a group, but also provides a philosophical foundation for our understand of the world.

### **IRSH 380 - Topics in Irish Studies. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 (or higher) or equivalent. A rotating variety of special topics in Irish Studies, including Irish and Irish-American cinema, major Irish/N. Irish authors, Irish cultural studies, and transatlantic and comparative studies.

Gen Ed Attributes: Writing Course-Intermediate

### **IRSH 381 - Contemporary Irish Women's Writing. 3 Credits.**

Offered every other spring semester. This course is designed to provide students with the rhetorical knowledge and cultural perspectives necessary to be successful writers at the college-level and more specifically within the field of Irish Studies. This course emphasizes the importance of critical thinking, reading, and composing in an academic context. To do this, students will explore research practices within the field of Irish Studies and related disciplines (such as feminist rhetorical practices, women's and gender studies, and postcolonial studies) and successful composing methods to bring these insights to the page. Students will expand their purview by examining the literary, historical, national, and gender contexts for interpreting Irish texts.

Gen Ed Attributes: Writing Course-Intermediate

### **IRSH 382 - Rockin' Rebels: Popular Irish Music from Traditional to Punk. 3 Credits.**

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Offered every other spring semester. This course explores the concept of Irishness through generative works of music by artists such as Sean O Riada, The Wolf Tones, The Pogues, Sinead O'Connor, U2, The Cranberries, Meav Ni Mhaolchatha, and Soule (not an exhaustive list). To do this the class will begin with an examination of traditional Irish music as a cultural form. Next, we will move through genres and decades charting political and cultural shifts as represented in folk, rebel, rock, punk, and pop music. We will explore concerns of authenticity and hybridity in Irish popular music and apply theoretical ways of understanding the reproduction and marketing of Irishness in a global context.

Gen Ed Attributes: Writing Course-Intermediate

### **IRSH 391 - Special topics. 1-6 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics;

### **IRSH 398 - Internship. 1-6 Credits.**

Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship may count toward graduation.

### **IRSH 490 - Research. 1-9 Credits.**

### **IRSH 491 - Special Topics. 1-3 Credits.**

### **IRSH 492 - Independent Study. 1-3 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics;

## Italian (ITLN) < University of Montana

### Italian (ITLN)

#### **ITLN 101 - Elementary Italian I. 4 Credits.**

Offered autumn. An introduction to Italian language and culture, with emphasis on the skills of reading, writing, comprehension, and speaking.

#### **ITLN 102 - Elementary Italian II. 4 Credits.**

Gen Ed Attributes: Foreign Language Requirement

#### **ITLN 191 - Special Topcis. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **ITLN 201 - Intermediate Italian I. 4 Credits.**

Offered autumn. Prereq., ITAL 102 or equiv. Expansion of active skills? listening, speaking, reading, writing, plus further cultural analysis.

#### **ITLN 202 - Intermediate Italian II. 4 Credits.**

#### **ITLN 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **ITLN 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **ITLN 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## Japanese (JPNS)

### **JPNS 101 - Elementary Japanese I. 5 Credits.**

Offered autumn. Understanding of grammar and basic sentence structures are taught as a foundation for oral comprehension. The students will learn Hiragana and Katakana, two syllabic writing systems, and approximately 400 Kanji ideographs.

### **JPNS 102 - Elementary Japanese II. 5 Credits.**

Offered spring. Prereq., JPNS 101. Continuation of 101.

Gen Ed Attributes: Foreign Language Requirement

### **JPNS 150H - Japanese Culture & Civilization. 3 Credits.**

Offered intermittently. Same as AS and LS 210H. The historical, religious, artistic, literary and social developments in Japan from earliest times to the present.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **JPNS 191 - Special Topics. 1-9 Credits.**

(R?9) Offered spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JPNS 201 - Intermediate Japanese I. 5 Credits.**

Offered autumn. Prereq., JPNS 102 or equiv. Reading and writing kanji; building oral/aural fluency.

Gen Ed Attributes: Foreign Language Requirement

### **JPNS 202 - Intermediate Japanese II. 5 Credits.**

Offered spring. Prereq., JPNS 201 or equiv. Continuation of JPNS 201.

Gen Ed Attributes: Foreign Language Requirement

### **JPNS 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JPNS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **JPNS 301 - Advanced Japanese. 4 Credits.**

Offered autumn. Prereq., JPNS 202 or equiv. Development of greater reading and speaking proficiency. Vocabulary enhancement and kanji (Chinese characters) are emphasized.

Gen Ed Attributes: Foreign Language Requirement

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### **JPNS 302 - Advanced Japanese. 4 Credits.**

Offered spring. Prereq., JPNS 301 or equiv. Continuation of 301.

Gen Ed Attributes: Foreign Language Requirement

### **JPNS 306 - Japanese for Business and Tourism. 3 Credits.**

Offered autumn alternate years. Prereq., JPNS 202 or equiv. Vocabulary and idiom of oral and written communication in business and tourism. Professional, ethical practices and special etiquette.

### **JPNS 312L - Japanese Literature: Medieval to Modern. 3 Credits.**

Offered spring alternate years. Prereq., WRIT 101 or equivalent, and one intermediate writing course. Introduction to the literature of Japan from the 15th to the 20th century.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Advanced

### **JPNS 371 - Japanese Film and Anime. 3 Credits.**

This course introduces students to salient events in the hundred-year history of Japanese cinema, including the age of silent film, the golden age of film directors, the New Wave, and contemporary Japanese cinema. Students will learn about Japanese cinema as the artistic expression of individual directors; they will gain a better understanding of the history of Japanese society and popular culture; and they will appreciate some of the reasons for the long-standing interest in Japan in the history of Western film studies.

### **JPNS 390 - Research. 1-12 Credits.**

Offered intermittently. Paid work experience in Japan, combined with language/culture course work by correspondence directed by UM department staff.

### **JPNS 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JPNS 392 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **JPNS 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **JPNS 411 - Modern Japanese Writers and Thinkers. 3 Credits.**

(R-6) Offered autumn or spring. Prereq., JPNS 202. Introduction to the important writers, thinkers, and poets of the 20th century. Readings include a wide range of topics in the humanities, including literature, philosophy, and the arts.

### **JPNS 412 - Introduction to Classical Japanese. 3 Credits.**

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Offered intermittently. Prereq., JPNS 202. Introduction to the language of the Japanese court, ca. 7th to 14th century. Essential features of grammar, sentence structure, vocabulary, and orthography.

### **JPNS 415 - Advanced Japanese for Professionals. 3 Credits.**

Offered spring even-numbered years. Prereq., JPNS 202. A high-level professional language course covering all coordinated reading, writing, and speaking skills. Intended for majors hoping to enter the Japanese job market and prepare for professional testing in Japan.

### **JPNS 431 - Post-War Japanese Literature. 3 Credits.**

Offered spring odd-numbered years. Introduction to issues, literature, and criticism of Japanese literature from the postwar (1945) through the contemporary period, using texts in English translation.

### **JPNS 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JPNS 492 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

## Journalism (JRNL)

### **JRNL 100H - Journalism & American Society. 3 Credits.**

Offered autumn and spring. A survey of the history, development and role of the media in society, including newspapers, magazines, radio, television, books, the internet and social media. The course examines ethical, political, financial and other issues related to mass media. Also included is an introduction to media literacy and critical thinking about the media and its messages.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **JRNL 102Y - News Literacy. 3 Credits.**

Offered intermittently. The course teaches students to become discriminating news consumers, helping them recognize the difference between news and propaganda, news and opinion, bias and fairness, and assertion and verification in news reports. It covers the foundation of news from its earliest forms through the current “fake news” controversy. And, it explores the First Amendment responsibilities of the press and how informed citizens are essential to a functioning democracy.

Gen Ed Attributes: Democracy and Citizenship (Y)

### **JRNL 105X - Global Current Events. 3 Credits.**

Offered autumn and spring. This deep-dive into the historical, cultural and political context of current news events allows every student to be “in the know” about world events.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **JRNL 140A - Introduction to Radio/Audio Storytelling. 3 Credits.**

Offered autumn. If you’ve ever heard a great, creative audio story on a podcast, online or on the radio, this course teaches the basics skills to pull that off. Learn the art of using sound and stories together by making them.

Gen Ed Attributes: Expressive Arts Course (A)

### **JRNL 170 - Writing the News. 3 Credits.**

Offered autumn and spring. Learn basic techniques and style of news writing for online, print, broadcast and social media audiences.

### **JRNL 191 - Special Topics. 1-6 Credits.**

### **JRNL 201 - Diversity in Media. 3 Credits.**

Offered autumn. Examination of how both local and national news media portray communities of color as well as other diverse populations. Students use content produced by news outlets to discuss how journalists’ personal views and professional practices affect their coverage of unfamiliar communities and cultures. Over the course of the semester, professional journalists of color are invited to discuss their own beats and how their background affects their work.

### **JRNL 257A - Beginning Video and Photojournalism. 3 Credits.**



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Offered autumn and spring. This hands-on introductory course in photo and video journalism explores visual storytelling and the tools used to produce quality still photo and video narratives. Students learn the technical, aesthetic and ethical aspects of digital photography and videography through weekly assignments.

Gen Ed Attributes: Expressive Arts Course (A)

### **JRNL 260 - Sports Journalism. 3 Credits.**

Offered intermittently. Prereq., JRNL 270. Study and practice of sports journalism in print and broadcast, including its history and its finest examples.

### **JRNL 270 - Reporting the News. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent, JRNL 100H and JRNL 170. Learn to gather and verify information, then write and produce news stories for a variety of online, broadcast news and mobile news media.

Gen Ed Attributes: Writing Course-Intermediate

### **JRNL 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JRNL 295 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JRNL 300 - First Amendment and Journalism Law. 3 Credits.**

Offered spring. Prereq., JRNL 270 or consent of instr. Overview of issues related to journalism and the law. Exploration of libel, privacy, prior restraints, access and other First Amendment questions along with ethical problems peculiar to media news gathering.

### **JRNL 328 - Intermediate Photojournalism. 3 Credits.**

Offered autumn and spring. Prereq., JRNL 257A. Students develop technical photography skills and ability to tell stories with images. In this workshop-style course students shoot a variety of deadline assignments including sports, features, portraits, news, events, strobe photography and photo stories. Assignments may be published on local news outlets and social media platforms.

### **JRNL 330 - News Editing. 3 Credits.**

Offered autumn and spring. Prereq., JRNL 270. Learn how to fix bad writing and make good writing great. This class teaches line editing and the elements of AP Style, grammar and usage. It also teaches conceptual editing, news savvy and tips for managing reporters.

### **JRNL 331 - Digital and Interactive Reporting. 3 Credits.**

Offered intermittently. Prereq., JRNL 270. Students learn to produce reporting for different websites and digital news sources, with a special emphasis on using digital technologies to broaden sources for stories. Course will also explore the societal, business and ethical effects of these emerging technologies.

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### **JRNL 332 - Social Media and Audience. 3 Credits.**

Offered autumn. Students learn to identify different and distinct audiences and to identify specific groups and users of information. They will develop research skills and craft content for social media platforms tailored to reach and engage those audiences. Students will learn the basics of audience research and best practices for the major social media platforms.

### **JRNL 340 - Intermediate Audio. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, JRNL 270 and JRNL 257A. Use of audio in news, interview and feature programs. Students will research, write, gather audio and produce audio segments and programs using digital audio equipment and studios. Students work with KBGA College Radio to produce daily newscasts for live broadcast.

Gen Ed Attributes: Writing Course-Advanced

### **JRNL 342 - Multimedia Sports Announcing and Writing. 3 Credits.**

Offered autumn. Prereq., JRNL 257A and JRNL 270. Students learn to research, produce and announce live sports broadcasts for audio and video audiences. They will also write preview and summary coverage for an online audience and use social media for reporting.

### **JRNL 350 - Intermediate Video Photography. 3 Credits.**

Offered autumn. Prereq., JRNL 257A. Students build digital video storytelling skills while working on weekly deadline assignments as well as an in-depth final project. Students will be introduced to high-definition video cameras and advanced non-linear video editing techniques and build on photojournalism skills introduced in JRNL 257A. Students produce television segments, including Business: Made in Montana, intended to air on MontanaPBS.

### **JRNL 351 - Intermediate Video Directing. 3 Credits.**

Offered spring. Prereq., JRNL 350. Students learn the fundamentals of production and directing of studio-based television/video programming. Students direct commercials, promotions and news. Students work with Intermediate Video Reporting & Producing (JRNL 352) to create and produce newscasts.

### **JRNL 352 - Intermediate Video Reporting and Producing. 3 Credits.**

Offered spring. Prereq., JRNL 350. Creation of video news stories and programs including story idea generation, research and interviewing techniques, sound selection, script writing, television anchoring and producing, video photography and editing. Works with Intermediate Video Directing (JRNL 351) to create news programs.

Gen Ed Attributes: Writing Course-Advanced

### **JRNL 362 - Feature Writing. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 or equivalent and JRNL 270. Take reporting and writing skills to the next level by reading, learning and writing creative and in-depth features. Adapt for journalism what you love about fiction: scenes, descriptions, arcs, character development, tension and conclusions. Satisfies the upper-division writing requirement within the major.

Gen Ed Attributes: Writing Course-Advanced

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### **JRNL 370 - Beat Reporting. 3 Credits.**

Offered autumn. Prereq., JRNL 270. Building on skills learned in Reporting and Elements of News Writing, students develop the necessary skill to navigate common reporting beats seen in newsrooms across the country. The course emphasizes both tenacious reporting and source development with accurate, confident writing all while under tight deadlines. Weekly assignments based on real-world reporting are commonly critiqued in-class with feedback geared toward improvement in both reporting and writing.

Gen Ed Attributes: Writing Course-Advanced

### **JRNL 391 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JRNL 392 - Independent Study in Broadcasting. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. and broadcast faculty. Independent study in broadcasting issues of interest.

### **JRNL 396 - Advanced Journalism Problems. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Independent study.

### **JRNL 400 - Ethics & Trends in News Media. 3 Credits.**

Offered autumn and spring. Prereq., JRNL 300 (for minors) or junior status for majors. The course examines the challenges and opportunities facing the news media's credibility and sustainability through studying cases and trends.

### **JRNL 410 - Native News Honors Project. 1-6 Credits.**

(R-6) Offered spring. Prereq., JRNL 270 and consent of instr. In this professional publications class students research, report, write, and design stories about Montana's Native American communities. Students travel to Montana's Indian reservations to document in-depth stories under a single theme and produce a newspaper and a multimedia website. Students meet strict deadlines in this capstone course. Satisfies Capstone requirement. Level: Undergraduate

### **JRNL 411 - Reporting Native News. 1-6 Credits.**

Offered spring. Prereq. JRNL 370 and consent of instr. In this professional publications class students research, report, write, and design stories about Montana's Native American communities. Students travel to Montana's seven Indian reservations to document in-depth stories under a single theme and produce a newspaper and a multimedia website. Students meet strict deadlines in this capstone course.

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### **JRNL 412 - Magazine Production and Design. 1-6 Credits.**

(R-6) Offered autumn. Prerequisite: consent of instructor. In this capstone course, students produce a journalistic print and online magazine. The staff includes editors, art director, writers, photographers, videographers, print and web designers and a social media team. Co-convenes with JRNL 640. Level: Undergraduate

### **JRNL 414 - Investigations. 3 Credits.**

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Offered autumn. Prereq., JRNL 370 or JRNL 352. Learn how to hold powerful people and institutions accountable. This class teaches students how to report on crime, corruption and malfeasance of all types. Included are techniques for developing deep sources and digging through data to uncover stories that have impact.

### **JRNL 427 - Photo Stories. 3 Credits.**

Offered spring. Prereq., JRNL 328. In this advanced course in photojournalism, students learn to research, shoot and edit photo stories. They hone their photography skills and vision, while working on several long-term projects, geared toward newspaper, magazine and online publications. Students learn multimedia techniques to enhance their photo stories with writing, video, audio, graphics and social media.

### **JRNL 428 - Freelance Photography. 3 Credits.**

Offered autumn. Prereq., JRNL 328. This workshop-style class centers on editorial, commercial and retail photography. Students work on-location and in the photo studio. Students produce adventure portraiture, astrophotography, music/concert photography, product and food illustrations, fashion projects and travel stories. The course covers copyright, contracts, branding/promotion, pricing, stock and assignment photography, licensing, negotiation and the cost of doing business as a freelance photographer.

### **JRNL 429 - Documentary Photojournalism. 3 Credits.**

Offered autumn. Prereq., JRNL 328 or consent of instructor. Production of an in-depth documentary project involving a social issue with intent to educate and inform. Students study historical and contemporary documentary photographers, then write, shoot and design final projects in book form or produce a multimedia project using stills, video, audio and text.

### **JRNL 430 - Print & Web Editing & Design. 3 Credits.**

Offered spring. Prerequisite: consent of instructor. Introduction to basic graphic design principles including visual hierarchy, typography and color. Students will develop visual design skills as they create logos, resumes, informational graphics, concert and movie posters, book covers, newspaper front pages, magazines and websites. Students learn Adobe InDesign, Adobe Illustrator and content management systems.

### **JRNL 431 - Online Journalism. 3 Credits.**

Offered intermittently. Prereq., JRNL 270 or consent of instructor. Specialized course that develops a multimedia website or production, often in partnership with other courses. Course introduces students to the basics of website design and organization, explores how the Internet can be used to generate sources for stories and directs students in using multimedia reporting techniques for a web-based news site.

### **JRNL 432 - Social Media and Audience II. 3 Credits.**

Offered spring. Prereq., JRNL 332 or consent of instructor. Having learned about the basics of audience research, goal setting and social media engagement in JRNL 332, this course focuses on having students work with real clients to assess their audiences, the goals for reaching them with information and their current social media strategy. Students will then work with the clients to develop and deploy new social media content and strategies.

### **JRNL 433 - Marketing Your Work. 3 Credits.**

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Offered spring. Prereq., JRNL 270. Learn how to freelance and get paid for it. Develop your big idea. Create the next media success story. This class teaches the business of freelancing including pitching stories, negotiating contracts, filing invoices and understanding taxes. It also requires students to think like an entrepreneur and create a media project.

### **JRNL 440 - Advanced Audio. 3 Credits.**

Offered spring. Prereq., JRNL 340 or consent of instr. This is the class to take if you're curious about exploring an audio career. You'll do creative, in-depth stories with lots of individual instruction, while learning the next-level skills required for podcasting and radio work. The class produces a professional project. This satisfies the capstone requirement.

### **JRNL 470 - Campaign Coverage. 3 Credits.**

Offered autumn of even-numbered years. Prereq., consent of instr. Students will provide multi-platform coverage of Montana's statewide candidates and ballot measures for a network of commercial and public news organizations.

### **JRNL 471 - Covering the Legislature. 3 Credits.**

(R-6) Offered spring of odd-numbered years. Prereq., JRNL 370 or consent of instr. Students will earn 1-6 credits producing coverage of Montana's biennial legislative sessions for newspapers, broadcast stations and the web.

### **JRNL 472 - Opinion Writing. 3 Credits.**

Offered intermittently. Prereq., JRNL 370 or consent of instr. Having an opinion is just the beginning to expressing it persuasively. This course teaches well-researched, well-written subjective writing with a focus on both arts criticism (movie reviews, music, books) and longform reported op-eds. Advanced level course for writers who like writing.

### **JRNL 473 - International Reporting. 3 Credits.**

Offered intermittently. Prereq., JRNL 270 or consent of instr. Prepares students to report internationally and to develop global sources for local stories. History and practice of foreign correspondence.

### **JRNL 480 - Reporting Video News. 3 Credits.**

Offered autumn. Prereq., JRNL 352. Teams of students report, write and produce weekly newscasts for online and television audiences. They get experience working on deadline as reporters, photographers, video editors, producers and anchors.

### **JRNL 481 - Advanced Video Photo and Directing. 3 Credits.**

Offered autumn. Prereq., JRNL 351 or consent of instr. Students work as a team in a television control room to record weekly mini-newscasts for online and television audiences. They get experience working on deadline as directors. and they learn to control studio cameras, audio, graphics and video playback.

### **JRNL 482 - Advanced Video Storytelling. 3 Credits.**

Offered autumn. Prereq., JRNL 350 or consent of instr. Teams will generate story ideas about Montana issues, businesses and people. Students will research, write, photograph, interview, edit and create long-form video programs. The programs generated in this course are intended for air on commercial and public television

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stations.

### **JRNL 484 - Daily News. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instructor. Students will report, write, produce, anchor, direct and technical direct daily television news updates to be made available to commercial and public television stations in Montana.

### **JRNL 488 - Student Documentary Unit. 3 Credits.**

Offered spring. In-depth examination of documentary film history and techniques and production of a video/television documentary on a topic of importance in Montana. Students will research, report, write, photograph, edit and promote the film intended for air on public and commercial outlets

### **JRNL 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JRNL 494 - Pollner Seminar. 3-6 Credits.**

(R-6) Offered autumn and spring. Prereq., Consent of Journalism Director. Seminar on a topic selected by the T. Anthony Pollner Distinguished Professor. Topics will range from journalism history, ethics, practices and performance to current issues in the news media.

### **JRNL 498 - Supervised Internship. 3 Credits.**

((R-6) Offered every term. Prereq., Junior status and consent of instructor. Open to students with the appropriate intermediate skills. Students are required perform 160 hours of work for news, communications, and media organizations. They will enroll for three credits and repeat for a maximum of six credits. All internships must be pre-approved by the faculty internship supervisor.

### **JRNL 505 - Journalism and Society Seminar. 3 Credits.**

Offered autumn. Prereq., graduate standing. Discussion and research about current journalism issues related to environmental science and natural resource journalism. Study of relevant traditional and online research methodology. Level: Graduate

### **JRNL 567 - Press/Broadcast Law. 3 Credits.**

Offered spring. Prereq., graduate standing. Examination and discussion of state and federal court cases affecting the mass media, with emphasis on First Amendment issues. Level: Graduate

### **JRNL 570 - Reporting. 3 Credits.**

Offered autumn. Prereq., graduate standing. Principles of news gathering through records, documents, meetings, observation of events, and interviewing with a focus on coverage of environmental science and natural resources. Producing news and feature accounts for broadcast, print and digital media. Perspectives on reporting standards and practices especially related to natural resource news. Level: Graduate

### **JRNL 575 - Story Lab. 3 Credits.**

Offered spring. Prereq., graduate standing. Journalism students are paired with UM researchers for a practicum on telling the stories of scientific research for a general news audience. Level: Graduate

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### **JRNL 590 - Methods in Journalism Research. 3 Credits.**

Prereq., consent of the graduate program director. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **JRNL 591 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **JRNL 592 - Independent Study. 3 Credits.**

(R-6) Prereq., consent of instr. Production and direction of studio and remote television programs. Level: Graduate

### **JRNL 594 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. A review and discussion of current research. Topics vary. Level: Graduate

### **JRNL 599 - Professional Project. 1-6 Credits.**

(R-6) Offered every term. Planning, research and execution of a major project in print, photographic or broadcast journalism. Level: Graduate

### **JRNL 620 - Covering Native American Issues. 3 Credits.**

Offered spring. Prereq., consent of instr. Researching, writing, photographing and/or editing in-depth special reports on issues that affect the Indians who reside within Montana's borders. Co-convenes with JRNL 410 and JOUR 411. Level: Graduate

### **JRNL 640 - Montana Journalism Review. 1-3 Credits.**

(R-6). Offered spring. Prereq., consent of instr. Intensive laboratory experience in all phases of magazine publication, including writing, editing, layout, design, production and distribution of an annual publication of the School of Journalism. Co-convenes with JRNL 412. Level: Graduate

### **JRNL 650 - Graduate Broadcast Newsroom-Editorial. 3 Credits.**

(R-6) Prereq., Consent of instr. Students fulfill all duties necessary to produce a weekly television newscast, including reporting, producing, directing, anchoring. Co-convenes with JRNL 480 and JRNL 481. Level: Graduate

### **JRNL 688 - Graduate Documentary. 3 Credits.**

Offered spring. Prereq., Consent of instr., graduate standing. Students conceive, research, report, photograph and edit a television documentary intended for broadcast on Montana PBS. Co-convenes with JRNL 488. Level: Graduate

### **JRNL 690 - Research in Journalism. 1-9 Credits.**

(R-9) Offered every term. Prereq., consent of the graduate program director. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **JRNL 691 - Special Topics. 1-9 Credits.**

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(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **JRNL 692 - Independent Study. 1-6 Credits.**

Offered every semester. Prereq., Consent of graduate director. Allows appropriate independent research in journalism or media/communication issues related to natural resource and environmental issues. Level: Graduate

### **JRNL 698 - Externship. 1-3 Credits.**

(R-3) Offered every term. Prereq., JRNL 570. Practical experience working for news media and other approved businesses, agencies or organizations focused on natural resource issues, industries or scientific research. Level: Graduate

### **JRNL 699 - Thesis. 1-6 Credits.**

(R-6) Offered every term. Research and writing of master's thesis. Level: Graduate



## Kinesiology (KIN)

### **KIN 105 - Foundations of Exercise Science. 3 Credits.**

Provides non-major students with a foundational understanding of exercise science as applied to fitness, health/wellness through lifestyle medicine applications, and sport performance implications. Scientific applications of exercise science are designed to complement applications of many human-based sciences (e.g., anatomy/physiology), but does necessitate prerequisite course completion. Investigation of the physiological changes and the significance of these changes as they occur during physical work, activity and exercise. Focus on basic energy, musculoskeletal, nervous, cardiovascular and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the response of these systems to both acute exercise, and the adaptations to chronic exercise. Credit not allowed toward exercise science degree options in Integrative Physiology and Athletic Training.

### **KIN 106 - Foundations of Exercise Science. 1 Credit.**

Laboratory sessions engage students in inquiry-based learning activities related to the core topics presented within the lecture section. In hands-on lab activities, students will formulate a hypothesis, design an experiment to test the hypothesis, and collect, interpret, and present the data to support their conclusions. Individual student phenotypes (e.g., propensities for success in high school athletics, or lack thereof) will be addressed according to established scientific understanding about prior sport participation may/may not be informed by current fitness outcomes. In addition, current and future health status will be examined relative to exercise and other lifestyle practices as a way of improving long-term health outcomes for preventing chronic diseases. Credit not allowed toward exercise science degree options in Integrative Physiology and Athletic Training.

### **KIN 201 - Basic Exercise Prescription. 3 Credits.**

Theory, principles, and practice of exercise prescription for aerobic and resistance exercise programs for health, fitness and performance.

### **KIN 205 - Foundations of HHP. 3 Credits.**

An overview of the foundational principles comprising the field of Integrative Physiology, Health and Allied Health with special emphasis on the historical and philosophical foundations, and the evolution of the unity of mind/body concept. Includes an overview of program options, analysis of future directions, and career choices.

### **KIN 248 - Principles Optimal Performance for Athletes. 2 Credits.**

Introduction to an optimal performance model, with focus upon specific physical, psychological, and environmental factors that contribute to human performance.

### **KIN 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **KIN 310 - Strength Training & Cond. 2 Credits.**

## University Of Montana

This course is designed to introduce students to the fundamentals of aerobic exercise and resistance training related to health, fitness and performance. Subject matter will include, but is not limited to maximizing student involvement in the understanding of physical training and the designing of exercise programs for health (both physical and mental), fitness and performance. This course will lay a basic practical foundation for students to design training programs, understand and design programs for athletic performance and to develop the fundamental theories of training for future coaches.

### **KIN 320 - Exercise Physiology. 3 Credits.**

Prereq., BIOH 370 or BIOH 211N, KIN 201; coreq., KIN 321. Investigation of the physiological changes and the significance of these changes as they occur during physical work, activity and exercise. Focus on basic energy, musculoskeletal, nervous, cardiovascular and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the response of these systems to both acute exercise, and the adaptations to chronic exercise. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

### **KIN 321 - Exercise Physiology Lab. 1 Credit.**

Prereq., BIOH 370 or BIOH 211N; coreq., KIN 320. Laboratory session examining the physiological effect of the physical work, activity and exercise on the functions of the human body. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

### **KIN 322 - Kinesiology. 3 Credits.**

Prereq., BIOH 211N or BIOH 370; coreq., KIN 323. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

### **KIN 323 - Anatomical Kinesiology Lab. 1 Credit.**

Prereq., BIOH 211N or BIOH 370; coreq., KIN 322. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

### **KIN 330 - Motor Learning and Control. 3 Credits.**

Prereq., BIOH 201N or BIOH 365. Focused on developing an understanding of the anatomy and physiology within the nervous system necessary for movement. Establishes an understanding of the basic science involved in the control of motor tasks, and uses this foundation to evaluate case studies that will focus on sport performance, clinical deficits, age-related alterations, learning of motor tasks following injury, and other motor-related tasks.

### **KIN 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **KIN 410 - Advanced Strength Training & Conditioning. 3 Credits.**

Prereq., KIN 320, senior or graduate student status. Advanced resistance and aerobic exercise testing and prescription for both healthy and clinical populations.

### **KIN 425 - Biomechanics. 3 Credits.**

## University Of Montana

Prereq., KIN 320 & M 115 or higher and major in Integrative Physiology or Athletic Training. Description and analysis of the fundamental principles of human movement. Includes quantitative study of the Newtonian mechanics governing biological motion and the roles of the musculo-skeletal, nervous and cardio-vascular systems during human activity.

### **KIN 440 - Sport Psychology. 3 Credits.**

Prereq., upper-division or graduate status. Course content is focused on the historical development of sport psychology, with emphasis upon the major principles and tactics of the discipline, including motivation, confidence, imagery, leadership, and team building.

### **KIN 447 - Analytical & Communicative Techniques. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course. Analysis and communicative critique of literature, cinema, and other forms of popular media that contain allegorical life themes. Substantial reading, speaking and writing component. Emphasis on improving and maintaining communication skills.

Gen Ed Attributes: Writing Course-Advanced

### **KIN 460 - ECG Assessment. 2 Credits.**

Prereq., junior, senior, or graduate status. Laboratory sessions combined with class sessions to understand electrocardiography and the assessment of electrocardiograms, both at rest and during exercise.

### **KIN 480 - Teaching Anatomy, Physiology. 4 Credits.**

(R-4) Prereq., student must have received at least a "B" in Human Anatomy and Physiology and consent of instructor. Students assist in preparation and grading of demonstrations and laboratory assignments, and provide laboratory instruction of undergraduate students enrolled in BIOH 201N/202N-211N/212N. Students are given advanced instruction in principles of human anatomy and physiology.

### **KIN 483 - Exercise Disease & Aging. 3 Credits.**

Prereq., KIN 320,321, 460; coreq. KIN 484. Focus on guidelines for exercise testing and prescription for individuals with chronic disease including heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease. Class requires 25 assigned hours of service learning. Covers material necessary for ACSM clinical certification exam when combined with KIN 201, 320, 321, 460, and 484.

### **KIN 484 - Exercise Disease & Aging Lab. 1 Credit.**

Prereq., KIN 320, 321; coreq., KIN 483. Laboratory sessions focus on practical exercise testing and prescription for individuals with chronic disease including coronary heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease; basic ECG testing and analysis. Covers material necessary for ACSM clinical certification exam when combined with KIN 201, 320, 321, 460, and 483.

### **KIN 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student.

### **KIN 492 - Independent Study. 1-3 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

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### **KIN 498 - Internship. 2-6 Credits.**

(R-6) Prereq. all INPH concentrations minimum junior standing and ECP 120/121 (or equivalent). Prereqs per concentration. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must take KIN 410 and COA 405 as corequisites. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must take KIN 460/483/484 as corequisites. Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 16 credits their internship semester.

### **KIN 499 - Capstone. 1-3 Credits.**

(R 6) Prereq., consent of instr. Independent work under the University omnibus option. See index.

## Languages: Sign < University of Montana

### Languages: Sign

#### **SIGN 101 - Introduction to American Sign Language. 3 Credits.**

Offered autumn. Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, fingerspelling, and grammatical non-manual signals. Focuses on basic expressive and receptive competence. In addition, the course provides a survey of various issues raised by examining ASL and the Deaf community.

#### **SIGN 201 - Intermediate American Sign Language. 3 Credits.**

Offered spring. Prereq., CSD 131. ASL II emphasizes further development of receptive and expressive skills; use of signing space; further use of non-manual components of ASL grammar including facial expression and body postures, and introduction to conversational regulators. Discussion of regional and ethnic sign variations, and social, political and educational institutions of the Deaf community. Interaction with members of the Deaf community in both directed and non-directed activities will be featured.

Gen Ed Attributes: Foreign Language Requirement

## Latin (LATN)

### **LATN 101 - Elementary Latin I. 3 Credits.**

Offered autumn. Latin I is the first course of a two-semester sequence, designed to enable the student to read authors in the original Latin as soon as possible. Based upon selected texts from Plautus, Vergil, Catullus, Livy, Ovid, Tacitus, and other major authors.

### **LATN 102 - Elementary Latin II. 3 Credits.**

Offered spring. Prereq., LATN 101. Continuation of 101. Latin grammar, vocabulary, readings.

Gen Ed Attributes: Foreign Language Requirement

### **LATN 191 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LATN 201 - Intermediate Latin I. 3 Credits.**

Offered autumn. Prereq., LATN 102 or equiv. Selections of Latin prose from the classical period, with complementary exercises in elementary composition.

Gen Ed Attributes: Foreign Language Requirement

### **LATN 202 - Intermediate Latin II. 3 Credits.**

Offered spring. Prereq., LATN 201 or equiv. Latin epic poetry: Vergil's Aeneid.

Gen Ed Attributes: Foreign Language Requirement

### **LATN 292 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **LATN 311 - Major Latin Authors. 3 Credits.**

(R?18) Offered autumn and spring. Prereq., LATN 202 or equiv. Plautus, Terence, Lucretius, Livy, Cicero, Vergil, Horace, Ovid, Tacitus, Juvenal, Pliny, Martial, etc.; also, Early Church fathers, Medieval and Renaissance Latin. Selection to suit students' needs and interests.

### **LATN 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LATN 392 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **LATN 492 - Independent Study. 1-12 Credits.**

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(R-12) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

## Law (LAW)

- LAW 500 - Civil Procedure I. 3 Credits.**
- LAW 501 - Civil Procedures II. 4 Credits.**
- LAW 502 - Contracts. 4 Credits.**
- LAW 504 - Law Fund: T&P. 1 Credit.**
- LAW 505 - Law Fund: T & P. 2 Credits.**
- LAW 506 - Law Fund: Research. 2 Credits.**
- LAW 507 - Global Perspectives on Law. 5 Credits.**
- LAW 508 - Law Fund: Analysis. 1 Credit.**
- LAW 509 - Legal Writing. 3 Credits.**
- LAW 510 - Criminal Law. 3 Credits.**
- LAW 511 - Criminal Procedure. 3 Credits.**
- LAW 512 - Torts. 4 Credits.**
- LAW 515 - Election Law. 1-4 Credits.**
- LAW 519 - Environmental Negotiation Mediation. 3 Credits.**
- LAW 520 - Wild Life Law. 3 Credits.**
- LAW 522 - Domestic Violence. 2 Credits.**
- LAW 523 - Juvenile Justice. 2 Credits.**
- LAW 524 - Legislation: Law & Politics. 3 Credits.**
- LAW 525 - Lawyers Values. 3 Credits.**
- LAW 526 - Business Tax II. 1-2 Credits.**
- LAW 527 - American Indian Cultural Preservation. 3 Credits.**
- LAW 528 - Advanced Problems Natural Resources. 3 Credits.**
- LAW 529 - Tax Practice & Procedure. 2 Credits.**
- LAW 530 - Climate Change. 2 Credits.**
- LAW 533 - Civil Rights Litigation. 2 Credits.**
- LAW 534 - Intellectual Property. 3 Credits.**
- LAW 537 - Law & Social Justice. 1 Credit.**



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**LAW 538 - Art & Cultural Property. 2 Credits.**

**LAW 539 - International Environmental Law. 3 Credits.**

**LAW 548 - Tax Practice & Procedure. 2 Credits.**

**LAW 549 - Environmental Crime. 2 Credits.**

**LAW 550 - Property. 4 Credits.**

**LAW 552 - Federal Tax. 3 Credits.**

**LAW 554 - Business Organizations. 3 Credits.**

**LAW 555 - Professional Responsibility. 3 Credits.**

**LAW 556 - Business Transactions. 3 Credits.**

**LAW 557 - Trial Practice. 2 Credits.**

**LAW 558 - Constitutional Law. 4 Credits.**

**LAW 560 - Evidence. 3 Credits.**

**LAW 564 - Law Review I. 1 Credit.**

**LAW 565 - Law Review II. 1 Credit.**

**LAW 570 - Academic Success Program. 0 Credits.**

**LAW 571 - Law Firm. 0 Credits.**

**LAW 579 - Tax Policy Seminar. 2 Credits.**

**LAW 580 - Corporate Tax. 2 Credits.**

**LAW 581 - Mediation Advocacy. 2 Credits.**

**LAW 582 - Foundations of Mediation. 1 Credit.**

**LAW 595 - Special Topics. 1-6 Credits.**

**LAW 599 - Clinical Training II. 1-15 Credits.**

**LAW 600 - Clinical Training III. 1-15 Credits.**

**LAW 601 - Clinical Training IV. 1-15 Credits.**

**LAW 602 - Law Review III. 1-2 Credits.**

**LAW 603 - Law Review IV. 1-2 Credits.**

**LAW 604 - Advanced Constitutional Law. 3 Credits.**

**LAW 605 - Animal Law. 2 Credits.**

**LAW 607 - Law and Literature. 1 Credit.**

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**LAW 608 - Advanced Legislative Research and Academic Writing. 2 Credits.**

**LAW 609 - UCC Article 2. 2 Credits.**

**LAW 610 - Advanced Skills Competition. 1 Credit.**

**LAW 611 - Indian Law Research. 1 Credit.**

**LAW 612 - Tax Exempt Organizations. 2 Credits.**

**LAW 613 - Natural Resource Conflict Resolution. 3 Credits.**

**LAW 614 - Alternative Dispute Resolution. 3 Credits.**

**LAW 615 - Advanced Legal Research. 2 Credits.**

**LAW 616 - Appellate Advocacy. 3 Credits.**

**LAW 617 - Advanced Problems in Federal Indian Law. 3 Credits.**

**LAW 618 - Montana Constitutional Law. 3 Credits.**

**LAW 619 - American Indian Natural Resource Law. 3 Credits.**

**LAW 620 - Elder Law. 3 Credits.**

**LAW 621 - Bankruptcy. 3 Credits.**

**LAW 622 - Employment Law. 3 Credits.**

**LAW 624 - Insurance Law. 3 Credits.**

**LAW 625 - Gender and the Law. 1 Credit.**

**LAW 626 - Advanced American Indian Natural Resource Law. 3 Credits.**

**LAW 627 - Patent Law. 2 Credits.**

**LAW 628 - Remedies. 3 Credits.**

**LAW 629 - International Business & Trade. 3 Credits.**

**LAW 630 - Lawyers' Values. 3 Credits.**

**LAW 631 - Law Practice. 2 Credits.**

**LAW 632 - Public Regulation of Business: Securities. 2 Credits.**

**LAW 633 - Natural Resource Development. 3 Credits.**

**LAW 634 - Public International Law. 3 Credits.**

**LAW 635 - Partnership Tax. 2 Credits.**

**LAW 636 - Secured Transactions. 3 Credits.**

**LAW 637 - Healthcare Law. 2 Credits.**

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- LAW 638 - Client Counseling Team. 2 Credits.**
- LAW 639 - Tax of Business Entities. 3 Credits.**
- LAW 640 - Tax of Property Transactions. 2 Credits.**
- LAW 641 - Negotiations. 2 Credits.**
- LAW 642 - Negotiation Team. 2 Credits.**
- LAW 643 - American Indian Culture, Religion, and Freedom. 3 Credits.**
- LAW 644 - White Collar Crime. 3 Credits.**
- LAW 645 - Consumer Law. 3 Credits.**
- LAW 646 - State and Local Government. 3 Credits.**
- LAW 647 - Advanced Intellectual Property. 2 Credits.**
- LAW 648 - Federal Indian Law. 3 Credits.**
- LAW 649 - Advanced Environmental Law. 3 Credits.**
- LAW 650 - Introduction to Environmental Law. 3 Credits.**
- LAW 651 - Oil and Gas Law. 3 Credits.**
- LAW 652 - Advanced Legislation. 3 Credits.**
- LAW 653 - Conflict of Laws. 2 Credits.**
- LAW 654 - Public Land & Resource Law. 3 Credits.**
- LAW 655 - Taxation of Estates & Gifts. 3 Credits.**
- LAW 656 - Agricultural and Food Law. 3 Credits.**
- LAW 657 - Products Liability. 3 Credits.**
- LAW 658 - Real Estate Transactions. 2 Credits.**
- LAW 659 - Estate Planning. 3 Credits.**
- LAW 660 - Independent Study. 1-4 Credits.**
- LAW 661 - Independent Study. 1-2 Credits.**
- LAW 662 - Workers' Compensation. 3 Credits.**
- LAW 663 - Water Law. 3 Credits.**
- LAW 664 - Philosophy of Law. 3 Credits.**
- LAW 665 - Administrative Law. 3 Credits.**
- LAW 666 - Moot Court. 1-2 Credits.**

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**LAW 667 - Supreme Court Seminar. 1-2 Credits.**

**LAW 668 - Disability Law. 1-2 Credits.**

**LAW 669 - Family Law. 3 Credits.**

**LAW 670 - Child Advocacy. 2 Credits.**

**LAW 671 - Federal Courts. 2 Credits.**

**LAW 672 - Alternative Dispute Resolution in Family Med. 3 Credits.**

**LAW 673 - Race & Racism. 2 Credits.**

**LAW 674 - Non-profit Organizations. 2 Credits.**

**LAW 675 - First Amendment Seminar. 2 Credits.**

**LAW 676 - Preparing for the Bar Exam. 3 Credits.**

**LAW 677 - Environmental Law Research. 1 Credit.**

**LAW 678 - Renewable Energy. 3 Credits.**

**LAW 679 - Collaborative Conservation. 1-3 Credits.**

**LAW 680 - Contemporary Legal Studies. 1-6 Credits.**

**LAW 681 - Independent Study. 1-2 Credits.**

**LAW 682 - Copyright/Trademark Laws. 2 Credits.**

**LAW 683 - International Law Research. 1 Credit.**

**LAW 685 - Advanced Trial Advocacy. 1 Credit.**

**LAW 686 - Advanced Education Law Issues. 3 Credits.**

**LAW 687 - Land Use Planning Law. 3 Credits.**

**LAW 688 - Tribal Courts/Tribal Law. 3 Credits.**

**LAW 689 - Special Topics. 1-6 Credits.**

**LAW 690 - Advanced Criminal Procedure. 3 Credits.**

**LAW 691 - Indian Child Welfare. 1 Credit.**

**LAW 694 - Tribal/State Relations. 2 Credits.**

## Legal Studies (LEG)

### **LEG 183 - Contracts. 2 Credits.**

Offered spring. Offered at Missoula College. Sources of law affecting the formation, enforceability, and interpretation of contracts. Includes the necessary elements of a contract, the basic doctrines of contract law, and practical approaches to drafting a contract.

### **LEG 184E - Legal Ethics. 3 Credits.**

Offered autumn. Offered at Missoula College. Introduction to ethical topics in the legal field, including confidentiality, professional relationships, fee arrangements, codes of professional conduct, attorney-client privilege, fiduciary responsibilities, and public service. The course will include a general introduction to the development of ethical concepts within the legal profession and the justice system.

Gen Ed Attributes: Ethical & Human Values Course

### **LEG 185 - Introduction Paralegal Studies. 2 Credits.**

Offered autumn. Offered at Missoula College. Students will develop an ability to analyze basic legal principles in real property law and practical experience increasing, organizing, and completing real estate transactions. Students in the course will develop fundamental skills; real estate, landlord-tenant, and land use law. Further, students will continue development of drafting skills, legal research, and case analysis.

### **LEG 186 - Introduction to Legal Research. 2 Credits.**

Offered autumn. Offered at Missoula College. Prereq., acceptance into program or consent of instr. Introduction to legal research focusing on how to find, use, understand, and correctly cite law library resources.

### **LEG 187 - Legal Research & Writing I. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 186. Advanced legal research focusing on how to find, use, understand, and correctly cite legal resources. Electronic research methods are presented. Application of legal research to writing is introduced.

### **LEG 188 - Principles of Real Estate. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., consent of instructor. Students will develop an ability to analyze basic legal principles in real property law and practical experience increasing, organizing, and completing real estate transactions. Students in the course will develop fundamental skills; real estate, landlord-tenant, and land use law. Further, students will continue development of drafting skills, legal research, and case analysis.

### **LEG 189 - Criminal Procedures. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., consent of instructor. Criminal prosecution and defense representation with an overview of criminal law principles. Training in criminal procedure involving felonies and misdemeanors in federal, Montana, and municipal courts.

### **LEG 191 - Special Topics. 1-6 Credits.**

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(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LEG 192 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Offered at Missoula College. Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

### **LEG 196 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **LEG 270 - Civil Litigation. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., LEG 185 or consent of instructor. Introduction to rules governing civil litigation involving the general nature of how lawsuits arise including client interviews and data gathering, pleading and practice from the filing of suit to file preparation for trial, and core considerations of ethics and professionalism.

### **LEG 272 - Computers & Law. 3 Credits.**

Offered at Missoula College. Prereq., CAPP 120 and LEG 185 or consent of instructor. This course provides an introduction to the growing use of computer technology in law offices. Topics will include using established and developing technologies to address issues such as metadata, online office suites, online storage, Google Apps tools, word processing, spreadsheets, database, calendar, task lists, Bates stamping, online and in-office security, case management, optical character recognition & PDF document storage, operating systems, computers, scanners, online security, sale of providers, instant messaging, email, social media, courtroom presentations, discovery, document review, websites, online advertising, collaborative document editing, client billing, client trust account management, payroll, speech recognition, networking systems, cloud computing, remote desktop programs, and scheduling programs.

### **LEG 282 - Contemporary Legal Issues. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 270 or consent of instructor. Capstone experience designed to investigate topical legal issues of immediate importance. Although the course has delineated structure, the nature of the course will allow both relevant concentrated focus as well as traditional disciplined examination of numerous areas of law practice and theory. The various pedagogical modules will offer students the opportunity to explore statutory structure, analyze case law, and draft legal forms.

### **LEG 283 - Trial Preparation. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 270 or consent of instructor. Capstone experience designed to investigate topical legal issues of immediate importance. Although the course has delineated structure, the nature of the course will allow both relevant concentrated focus as well as traditional disciplined examination of numerous areas of law practice and theory. The various pedagogical modules will offer students the opportunity to explore statutory structure, analyze case law, and draft legal forms.

### **LEG 285 - Family Law. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 286 or consent of instructor. Study of Montana law relating to marriage, husband and wife, parent and child, termination of marriage, adoption, joint and sole custody arrangements and modifications, child support guidelines, and juvenile issues. Includes preparation

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of standard family law documents.

### **LEG 286 - Legal Research & Writing II. 2 Credits.**

Offered autumn. Offered at Missoula College. Prereq., LEG 186 and 187. Advanced legal research and writing with emphasis on drafting and composing legal memoranda; legal research skills and development of legal writing ability.

### **LEG 287 - Legal Research & Writing III. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 286. Continued development of legal research and writing skills including advanced legal theory/case law synthesis, drafting correspondence, pleadings, discovery documents, persuasive writing. Upon completion of this course, the student will be able to: research, analyze, synthesize, and prioritize law cases, treatises, doctrines, theory of the law, legal rules, and other information and draft appropriate correspondence, pleadings, motions, briefs, discovery documents or memoranda relating to that information as would be anticipated in a law office.

### **LEG 288 - Estate Administration. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., LEG 286 or consent of instructor. This course provides an overview of the law as it applies to wills, trusts, and other estate matters. Topics include the nature and sources of the law relating to wills, trusts, and estates, estate planning, intestate succession, family protection, probate, and estate taxes.

### **LEG 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LEG 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Offered at Missoula College. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **LEG 298 - Paralegal Studies Internship. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., approval of program director. On-the-job experience as a paralegal trainee under the supervision of an employer, attorney, or court official. This experience increases students' skills, prepares them for initial employment and advancement on the job, and increases occupational awareness and professionalism. Students work a minimum of 90 hours at an approved site and attend a weekly one-hour seminar.

## Library Science (LSCI) < University of Montana

### Library Science (LSCI)

#### **LSCI 191 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **LSCI 192 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

#### **LSCI 200 - Research Strategies. 1 Credit.**

Offered every term. Introduces on-campus and distant students to academic library research methods and resources with a focus on remote access and services for distant students. Explores all steps of academic research including how to find information and use critical thinking to evaluate sources.

#### **LSCI 210Y - Who Owns Culture? An Introduction to Copyright. 3 Credits.**

Students will learn how copyright affects their rights and responsibilities in creative processes as well as access to information.

Gen Ed Attributes: Democracy and Citizenship (Y)

#### **LSCI 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **LSCI 292 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

#### **LSCI 391 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Gen Ed Attributes: Writing Course-Intermediate

#### **LSCI 392 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

#### **LSCI 398 - Internship. 1-6 Credits.**



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(R-6) Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LSCI 491 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LSCI 492 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student.

### **LSCI 498 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LSCI 595 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **LSCI 596 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instructor. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **LSCI 598 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

## Linguistics (LING)

### **LING 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LING 198 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LING 238 - Structure and Function of Language. 3 Credits.**

Offered intermittently. This course concentrates almost exclusively on English, particularly as it relates to the written word and reading processes practiced thereupon: It's not a course that teaches students "how to read" but "how you read" (i.e., make print intelligible).

### **LING 270S - Intro to Linguistics. 3 Credits.**

Offered autumn and spring. An introduction to the field of modern linguistics and to the nature of language. Emphasis on the ways different cultures develop symbol systems for representing meaning.

Gen Ed Attributes: Social Sciences Course (S)

### **LING 375X - Linguistic Ecology and Language Endangerment. 3 Credits.**

Offered spring. Survey of endangered languages and the communities in which those endangered languages are spoken. Topics to be addressed include linguistic diversity, language endangerment, language shift and loss, language maintenance efforts, and prospects for the future of these languages.

Gen Ed Attributes: Writing Course-Intermediate, Cultural Intl Diversity (X)

### **LING 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LING 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LING 465 - Structure & History of English. 3 Credits.**

Offered intermittently. The development of the English language from a historical perspective contrasted with the phonological and grammatical structure of English from a modern linguistic point of view; specifically designed for teachers.

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### **LING 470 - Linguistic Analysis. 3 Credits.**

Offered autumn. An in-depth examination of the formal properties of language, concentrating on the core areas of linguistic analysis (phonetics, phonology, morphology, syntax and semantics).

### **LING 471 - Phonetics and Phonology. 3 Credits.**

Offered autumn. Prereq., LING 470. A study of phonetic and phonological systems from as many as 20 languages, most of them non-Indo-European; training in how to do linguistic analysis as well as linguistic theory. This course co-convenes with LING 571.

### **LING 472 - Syntax. 3 Credits.**

Offered autumn. Prereq., LING 470. A study of the human language sentence-formation system, the means for expressing semantic information as propositional content. Emphasis on the abstraction of utterances in the form of mathematical objects. This course co-convenes with LING 572.

### **LING 473 - Language and Culture. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course and LING 270 or equivalent. Technical study of the relationships between grammatical categories and world view. This course co-convenes with LING 573.

Gen Ed Attributes: Writing Course-Advanced

### **LING 474 - Historical Linguistics. 3 Credits.**

Offered spring, even-numbered years. Prereq., LING 470. An introduction to the study of language change over time. Topics include: methods for studying language change (the comparative method and internal reconstruction); types of language change (sound change, borrowing, analogical change, lexical, syntactic, and semantic change); and explanations for language change. The principles of historical reconstruction and comparative method in the analysis of linguistic variation and change. This course co-convenes with LING 574.

### **LING 475 - Linguistic Field Methods. 3 Credits.**

Offered spring odd-numbered years. Prereq., LING 470. Writing up linguistic data; developing techniques for eliciting linguistic data by working with a native speaker of a less commonly taught language. This course co-convenes with LING 575.

### **LING 477 - Bilingualism. 3 Credits.**

Offered autumn. Prereq., LING 270S or LING 470. Societal and individual bilingualism: topics include language policy, maintenance, interference, code-switching and mixing, and bilingual education.

### **LING 478 - Learner Language. 3 Credits.**

Offered spring, odd-numbered years. Prereq., LING 270S or LING 470. Observing/describing language learners' behaviors and, to a degree, advances toward proficiency (i.e., fluency plus accuracy); the presence of error as conditioned by a priori knowledge of language and implications for child and adult development; and applying typical methods of linguistic analysis to the (non-) systematic variants in language form characterizing developmental processes as a way of trying to explain variable behavior.

### **LING 480 - Teaching English as a Foreign Language. 3 Credits.**

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Offered intermittently. Prereq., LING 270 or equiv. The application of principles of modern linguistics to the problems of teaching English as a foreign language.

### **LING 484 - North American Indigenous Language & Linguistics. 3 Credits.**

Offered autumn odd-numbered years. Prereq., WRIT 101 or equivalent and LING 470. Description and analysis of grammatical features of Indigenous languages of North America. This course co-convenes with LING 584.

Gen Ed Attributes: Writing Course-Advanced

### **LING 489 - Morphology. 3 Credits.**

Offered spring. Prereq., LING 470. A survey of the morphological features of several unrelated languages to provide the student with a broad overview of how languages compare and contrast. This course co-convenes with LING 589.

### **LING 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **LING 492 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Special projects in linguistic analysis.

### **LING 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., LING 270 or LING 470. A review and discussion of advanced topics covering descriptive linguistics, linguistic theory and subjects related to the analysis of human languages.

### **LING 495 - ESL Practicum. 1-3 Credits.**

Offered autumn and spring. Prereq., or coreq., LING 480. Offered every term. Students with a teaching major take the course for 3 credits; others take it for 1 credit.

### **LING 498 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **LING 559 - Preceptorship. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., consent of instr. Materials development, assessment and evaluation of learners' needs and interests in teaching English as an academic second Language to international students attending universities with English instruction. Level: Graduate

### **LING 570 - Seminar in Linguistics. 3 Credits.**

(R-12) Offered autumn and spring. Advanced topics in linguistic analysis. Level: Graduate

### **LING 571 - Phonetics and Phonology. 3 Credits.**

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Offered autumn. A study of phonetic and phonological systems from as many as 20 languages, most of them non-Indo-European; training in how to do linguistic analysis as well as linguistic theory. This course co-convenes with LING 471. Graduate students taking LING 571 will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 572 - Syntax. 3 Credits.**

Offered autumn. Prereq., LING 470 or equivalent. An investigation of human language sentence formation systems, construed as functions (combinatorial computations) mapping utterances (physical sounds) to propositions (mental meanings). Emphasis on abstracting away from observable cross-linguistic data in favor of underlying formal (i.e., computational) structures. This course is co-convened with LING 472. Level: Graduate

### **LING 573 - Language and Culture. 3 Credits.**

Offered spring. Technical study of the relationships between grammatical categories and world view. This course co-convenes with LING 473. Graduate students will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 574 - Historical Linguistics. 3 Credits.**

Offered spring even-numbered years. An introduction to the study of language change over time. Topics include: methods for studying language change (the comparative method and internal reconstruction); types of language change (sound change, borrowing, analogical change, lexical, syntactic, and semantic change); and explanations for language change. The principles of historical reconstruction and comparative method in the analysis of linguistic variation and change. This course co-convenes with LING 474. Graduate students will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 575 - Linguistic Field Methods. 3 Credits.**

Offered spring odd-numbered years. Writing up linguistic data; developing techniques for eliciting linguistic data by working with a native speaker of a less commonly taught language. This course co-convenes with LING 475. Graduate students will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 584 - NA Indigenous Language and Linguistics. 3 Credits.**

Offered autumn odd-numbered years. Description and analysis of grammatical features of Indigenous languages of North America. This course co-convenes with LING 484. Graduate students will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 589 - Morphology. 3 Credits.**

Offered spring. A survey of the morphological features of several unrelated languages to provide the student with a broad overview of how languages compare and contrast. This course co-convenes with LING 489. Graduate students taking LING 589 will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **LING 595 - Special Topics. 1-9 Credits.**

(R?9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

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### **LING 596 - Independent Study. 1-3 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **LING 598 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **LING 599 - Professional Paper. 1-6 Credits.**

(R-6) Offered intermittently. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **LING 699 - Thesis. 1-6 Credits.**

(R-6) Offered autumn and spring. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## MBA < University of Montana

### MBA

#### **MBA 603 - Integrated Project. 1 Credit.**

Offered spring. Prereq., admission to the M.B.A. or M-Acct. program; coreq., BMGT 665. This is the capstone course of the MBA program and is offered during the last five weeks of spring semester. Students develop a business plan that requires the incorporation of knowledge from all other core MBA courses. Level: Graduate

#### **MBA 645 - Interpersonal Perspectives. 1-12 Credits.**

(R-12) Offered every term. Prereq., admission to the M.B.A. or M-Acct. program. Some classes are open to pre-MBA and pre-M-Acct. students. Selected topics cover leadership theory and practice, ethics in the workplace, and managerial processes such as motivation, communication, conflict resolution, negotiations, team building, critical thinking, goal setting, and building workforce commitment. MBA students must complete at least 2 credits of interpersonal perspective coursework for the MBA degree. Level: Graduate

#### **MBA 655 - Technology Seminar. 1-12 Credits.**

(R-12) Offered every term. Prereq., admission to the M.B.A. or MAcct. programs. Contemporary issues in information technology with emphasis on how technology is used in business organizations. Topics vary each term and may include electronic commerce on the internet, decision support technology, electronic media support, advanced spreadsheet applications, accounting applications and quality control systems. Level: Graduate

#### **MBA 692 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Directed study of individual or small groups of students in topics not available in scheduled classes. Level: Graduate

#### **MBA 694 - Seminar. 1-15 Credits.**

(R-15) Offered every term. Prereq., graduate student in business or consent of business graduate director. Selected topics in business. Level: Graduate

#### **MBA 695 - Practicum. 1-6 Credits.**

Practical hands-on experience with area organizations. Provides application of classroom learning. Level: Graduate

#### **MBA 696 - Independent Study. 1-9 Credits.**

(R 9) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Directed study of individual or small groups of students in topics not available in scheduled classes. Level: Graduate

#### **MBA 698 - Internship. 1-3 Credits.**

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(R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Placements with private or governmental organizations for practical training in business. Written reports required. Level: Graduate

### **MBA 699 - Thesis. 1-6 Credits.**

(R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director. Level: Graduate



## Management Information Systems (MIS)

### **MIS 260 - Life and Health Insurance. 3 Credits.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of life and health insurance as well as the legal and regulatory environment for each industry.

### **MIS 261 - Life Insurance. 1 Credit.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of life insurance as well as the life insurance industry's legal and regulatory environment.

### **MIS 262 - Health Insurance. 1 Credit.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of health insurance as well as the health insurance industry's legal and regulatory environment.

### **MIS 263 - Property and Casualty Insurance. 3 Credits.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of property insurance as well as the property insurance industry's legal and regulatory environment.

### **MIS 264 - Property Insurance. 1 Credit.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of property insurance as well as the property insurance industry's legal and regulatory environment.

### **MIS 265 - Casualty Insurance. 1 Credit.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of casualty insurance as well as the casualty insurance industry's legal and regulatory environment.

### **MIS 266 - Personal Lines Insurance. 1 Credit.**

Offered intermittently through School of Extended and Lifelong Learning (formerly Continuing Education). Introduction to the principles of personal lines insurance as well as the personal lines insurance industry's legal and regulatory environment.

## Mansfield Center (MANS) < University of Montana

### Mansfield Center (MANS)

#### **MANS 103 - Intermediate Persian-Farsi I. 5 Credits.**

The Persian-Farsi language belongs to category III languages as defined by the DLIFLC (Defense Language Institute Foreign Language Center). This course is designed for students who have reached the proficiency level 1/1 on the ILR scale (Interagency Language Roundtable) in Persian-Farsi. The goal of the course is to equip students with listening, speaking and reading skills in Persian-Farsi to sustain their proficiency level and/or achieve a 1+/1+ on their OPI. This course is designed to help students develop effective skills in communicating via the Persian-Farsi language in a wide range of topics. The course focuses on Modern Standard Persian-Farsi as well as the Tehrani dialect of Persian language. Students will be equipped with the necessary skills to understand, speak, (possibly) read and write in Persian-Farsi at an intermediate level. Furthermore, students will also be well-versed in the strategic cultures of Iran and the region and will develop a deeper understanding of the key historical and political trends in the region.

#### **MANS 104 - Intermediate Levantine Arabic I. 5 Credits.**

This is a five credit course, with six 50-minute classes a day, daily written and oral exercises and homework. The class meets for 6 weeks for a total of 168-180 contact hours in class. Two (2) contact hours each week are dedicated for cultural class (lectures on the cultures, politics, and history of the Middle East). In addition, students spend 2 hours out of class each day for self-study and homework.

#### **MANS 105 - Intermediate Modern Standard Arabic I (MSA). 5 Credits.**

This DCLCP course is designed to meet DoD (Department of Defense) Total Force MSA language training needs, with an emphasis on the fifth group language training needs (Fort Campbell, Kentucky) in order to improve their language, regional, and cultural expertise. As a part of DoD Language Training Center, the course is open exclusively for U.S. DoD personnel who would not otherwise enroll in other University of Montana language courses. Nonetheless, the DCLCP does encourage its students to pursue degrees in University programs like Middle Eastern Studies, or Political Science offered by the University of Montana. The Modern Standard Arabic language belongs to category IV languages as defined by the DLIFLC (Defense Language Institute Foreign Language Center). This Intermediate MSA course is designed for students who have reached the proficiency level 1/1 on the ILR scale (Interagency Language Roundtable). The goal of the course is to equip students with communicative skills in listening, speaking, and reading at the upper-intermediate/advanced level in the Modern Standard Arabic language.

#### **MANS 106 - Elementary Indonesian. 5 Credits.**

Indonesian language belongs to category II languages as defined by the DLIFLC (Defense Language Institute Foreign Language Center). The Elementary Indonesian Course is designed for those students who are in their initial Indonesian language acquisition level. Student knowledge can vary from `zero` (or no knowledge of the language) to some elementary skills in the target language. The course is organized by topics, grammar points and cultural notes. Students develop fluency of comprehension and oral skills to express their needs as well as simple ideas about family, hobbies, jobs, and daily activities. The classes mainly consist of three components: listening, reading, and speaking. There are some writing tasks as optional assignments. At the

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end of each week, students are given quizzes to recapitulate what they have acquired during the week. Quizzes include DLPT5-like mock tests (Defense Language Proficiency Test 5), OPI (Oral Proficiency Interview), and written tests.

### **MANS 107 - Elementary Korean I. 5 Credits.**

The Defense Critical Language and Culture Program (DCLCP) (of The University of Montanas Maureen and Mike Mansfield Center) provides intensive language and culture training for members of the National Guard, Reserve, and Active Duty utilizing a congressionally funded Language Training Center (LTC) contract through the Department of Defense Language and National Security Education Office (DLNSEO)?Grant title: Subaward 2013-LTC-Montana (H98210-13-2-0001).

### **MANS 108 - Elementary Chinese I. 5 Credits.**

The Defense Critical Language and Culture Programs Elementary I is an intensive 120-hour, 30 hours per week course (with 5 hours dedicated to culture and regional studies in English), equivalent to 6 months of college language courses. The course is for Special Forces military students who have previous language training in Chinese language, yet whose skills may have eroded somewhat due to insufficient practice. Students are admitted into the elementary Chinese-Mandarin class if they currently perform at either 0 or 0+ on the Interagency Language Roundtable (ILR) scale. In class, the target language is used exclusively when teaching the language, with no English permitted (unless in a case of an emergency when the Chinese word is unknown). Standard Chinese or Modern Standard Chinese (MSC), also known as Mandarin, Putonghua and Guoyu is the official language of the Peoples Republic of China, the Republic of China (Taiwan) and one of the four official languages of Singapore. Due to the complexities of this language, the Defense Language Institute categorized MSC as Category IV language, one of the toughest languages to learn for non-native speakers. The majority of the class will be conducted via Video Tele Conferencing (VTC); the remaining portion of the class will be in residence. In order to create communicative and task-based and skill-integration activities in improving students overall language proficiency level, additional tutoring, counseling and coaching will also be conducted.

### **MANS 195 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of new courses or one-time offerings of current topics.

### **MANS 203 - Intermediate Persian-Farsi II. 4 Credits.**

This course is designed to help students develop effective skills in communicating via the Persian-Farsi language in a wide range of topics. The students will be able to understand face-to-face speech in a standard dialect, delivered at a normal rate by a native speaker. Students will have sufficient comprehension to read simple, authentic written material on subjects within a familiar context. They will locate and understand the main ideas and details in videos and news broadcasts for the general Persian speaking public. Students will also be able to comprehend social, political and cultural customs and norms of Iran as well as the region. To achieve the above-mentioned goals, the course utilizes a functional/thematic based approach to help language learners gain rich meaningful knowledge of the target language and culture. It focuses on effective and meaningful communication to refine and improve students accuracy and fluency as well as comprehension and production through engaging them in meaningful tasks and functions. The classes focus mainly on active participation of the learners in various meaningful students-centered tasks: student presentations, group discussions, students teaching their culture to the instructors, and students teaching

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the target language to their classmates as teacher assistants. At the end of each week, students are given quizzes to recapitulate what they have acquired during the week. Quizzes include both written and oral tests (OPI and DLPT-like tests, Oral Proficiency Interview and Defense Language Proficiency Test, respectively).

### **MANS 204 - Intermediate Levantine Arabic II. 4 Credits.**

This DCLCP course is designed to meet DoD (Department of Defense) Total Force Levantine Arabic language training needs, with an emphasis on the fifth group language training needs (Fort Campbell, Kentucky) in order to improve their language, regional, and cultural expertise. As a part of DoD Language Training Center, the course is open exclusively for U.S. DoD personnel who would not otherwise enroll in other University of Montana language courses. Nonetheless, the DCLCP does encourage its students to pursue degrees in University programs like Middle Eastern Studies, or Political Science offered by the University of Montana. The Levantine Arabic language belongs to category IV languages as defined by the DLIFLC (Defense Language Institute Foreign Language Center). This Intermediate Levantine Arabic course is designed for students who have Completed MANS-295 Intermediate Levantine Arabic I. The goal of the course is to equip students with communicative skills in listening, speaking, and reading at the upper-intermediate/advanced level in the Levantine Arabic language.

### **MANS 205 - Intermediate Modern Standard Arabic II (MSA). 4 Credits.**

This DCLCP course is designed to meet DoD (Department of Defense) Total Force Modern Standard Arabic language training needs, with an emphasis on the fifth group language training needs (Fort Campbell, Kentucky) in order to improve their language, regional, and cultural expertise. As a part of DoD Language Training Center, the course is open exclusively for U.S. DoD personnel who would not otherwise enroll in other University of Montana language courses. Nonetheless, the DCLCP does encourage its students to pursue degrees in University programs like Middle Eastern Studies, or Political Science offered by the University of Montana. The Modern Standard Arabic language belongs to category IV languages as defined by the DLIFLC (Defense Language Institute Foreign Language Center). This Intermediate MSA course is designed for students who have Completed MANS 105 Intermediate Modern Standard Arabic I. The goal of the course is to equip students with communicative skills in listening, speaking, and reading at the upper-intermediate/advanced level in the Modern Standard Arabic language.

### **MANS 206 - Intermediate Indonesian Language and Culture. 5 Credits.**

This DCLCP course is designed to meet DoD (Department of Defense) Total Force Indonesian language training needs, with an emphasis on the 1st Special Forces Group (Joint Base Lewis McChord, WA) in order to improve their language, cultural and regional expertise. As a part of DoD Language Training Center, the course is open exclusively for U.S. DoD personnel who would not otherwise enroll in other University of Montana language courses. Nonetheless, the DCLCP does encourage its students to pursue degrees in University programs like East Asian Studies, Central Asian Studies, or political science after their discharge from the armed forces.

### **MANS 207 - Intermediate Korean I. 5 Credits.**

The Defense Critical Language and Culture Program (DCLCP) (of The University of Montanas Maureen and Mike Mansfield Center) provides intensive language and culture training for members of the National Guard, Reserve, and Active Duty utilizing a congressionally funded Language Training Center (LTC) contract through the Department of Defense Language and National Security Education Office (DLNSEO)? Grant title: Subaward 2013-LTC-Montana (H98210-13-2-0001).

### **MANS 208 - Intermediate Chinese I. 5 Credits.**

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The Defense Critical Language and Culture Programs Intermediate I is an intensive 120-hour, 30 hours per week course (with 5 hours dedicated to culture and regional studies), equivalent to 6 months of college language courses.

### **MANS 295 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of new courses or one-time offerings of current topics.

### **MANS 296 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently.

### **MANS 306 - Advanced Indonesian Language and Culture. 5 Credits.**

This DCLCP course is designed to meet DoD (Department of Defense) Total Force Indonesian language training needs, with an emphasis on the 1st Special Forces Group (Joint Base Lewis McChord, WA) in order to improve their language, regional, and cultural expertise. As a part of DoD Language Training Center, the course is open exclusively for U.S. DoD personnel who would not otherwise enroll in other University of Montana language courses. Nonetheless, the DCLCP does encourage its students to pursue degrees in University programs like East Asian Studies, Central Asian Studies, or political science after their discharge from the armed forces

### **MANS 307 - Advanced Korean I. 5 Credits.**

The Defense Critical Language and Culture Program (DCLCP) (of The University of Montanas Maureen and Mike Mansfield Center) provides intensive language and culture training for members of the National Guard, Reserve, and Active Duty utilizing a congressionally funded Language Training Center (LTC) contract through the Department of Defense Language and National Security Education Office (DLNSEO)?Grant title: Subaward 2013-LTC-Montana (H98210-13-2-0001).

### **MANS 308 - Advanced Chinese I. 5 Credits.**

The Defense Critical Language and Culture Programs Advanced I is an intensive 120-hour, 30 hours per week (with 5 hours dedicated to culture and regional studies in the target language), equivalent to 6 months of college language courses. The course is for Special Forces military students who have previous language training in Chinese language, yet whose skills may have eroded somewhat due to insufficient practice. Students are admitted into the advanced Chinese-Mandarin class if they currently perform at either 2 or 2+ on the Interagency Language Roundtable (ILR) scale. In class, the target language is used exclusively, with no English permitted (unless in a case of an emergency when the Chinese word is unknown). Standard Chinese or Modern Standard Chinese (MSC), also known as Mandarin, Putonghua and Guoyu is the official language of the Peoples Republic of China, the Republic of China (Taiwan) and one of the four official languages of Singapore. Due to the complexities of this language, the Defense Language Institute categorized MSC as Category IV language, one of the toughest languages to learn for non-native speakers. The majority of the class will be conducted via Video Tele Conferencing (VTC); the remaining portion of the class will be in residence. In order to create communicative and task-based and skill-integration activities in improving students overall language proficiency level, additional tutoring, counseling and coaching will also be conducted.

### **MANS 395 - Special Topics. 1-9 Credits.**

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(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MANS 398 - Internship. 1-6 Credits.**

### **MANS 494 - Mansfield Center Seminar. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary.

### **MANS 495 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MANS 496 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MANS 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

## Mathematics (M)

### **M 065 - Prealgebra. 3 Credits.**

Offered every term. Offered at Missoula College. Arithmetic and basic algebra skills needed for Introductory Algebra. Topics include integers and rational numbers, decimals and percentages with applications, ratios and proportions with applications, single variable linear equations with applications, introduction to graphing, exponents, factoring, and an introduction to polynomials. Credit does not count toward a certificate or degree. Credit does not count toward Associate of Arts, Associate of Applied Science, or Baccalaureate degrees. MC

### **M 090 - Introductory Algebra. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., M 065 or appropriate math placement score. Review of arithmetic principles of integers and rational numbers, linear equations in one or two unknowns, systems of linear equations and operations with polynomials and rational expressions. Credit does not count toward an Associate of Arts, Associate of Applied Science, or Baccalaureate degree. MC

### **M 095 - Intermediate Algebra. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., M 090 or appropriate math placement score. Topics include linear equations, inequalities, applications and graphing; polynomials; radicals, rational exponents and complex numbers; quadratic equations. Graphing calculator required. Credit does not count toward Associate of Arts or Baccalaureate degrees. MC

### **M 104 - Numbers as News. 3 Credits.**

Offered intermittently. Prereq. M 090 with a grade of B- or better, or M 095, or ALEKS placement  $\geq 3$ , M01-Maplesoft Arithmetic score  $\geq 16$  or ACT score of 22, or SAT score of 520. An exploration of mathematics and statistics as used in the popular media. For students in the School of Journalism only.

Gen Ed Attributes: Math Competency Course

### **M 105 - Contemporary Mathematics. 3-4 Credits.**

Offered every term. Prereq., M 090 with a grade of RC- or better, or M 095, or ALEKS placement  $\geq 3$ , or M01-Maplesoft Arithmetic score  $\geq 16$ , or ACT score of 22, or SAT score of 550 (with the new test), or completion of the M105 EdReady module. An introduction to mathematical ideas and their impact on society. Intended for students wishing to satisfy the general education mathematics requirement. Co-Requisite Support sections of M 105 are 4 credits; they are offered Autumn and Spring and require consent of instructor.

Gen Ed Attributes: Math Competency Course

### **M 111 - Technical Mathematics. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Designed to provide the mathematical background necessary for success in the industrial areas. Topics covered include percent, ratio proportion, formula evaluation, basic algebra and geometry concepts, trigonometry, measurement, statistics, and graphing. Markdowns, inventory turnover, and other basic formulas. Credit does not count toward Associate of Arts or Baccalaureate degrees.

### **M 115 - Probability and Linear Mathematics. 3-4 Credits.**

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Offered every term. Prereq., M 090 with a grade of RC- or better, or M 095, or ALEKS placement  $\geq 3$  or M01-Maplesoft Arithmetic score  $\geq 16$ , or ACT score of 22, or SAT score of 550 (with the new test), or completion of the M 115 EdReady module. Systems of linear equations and matrix algebra. Introduction to probability with emphasis on models and probabilistic reasoning. Examples of applications of the material in many fields. Co-Requisite Support sections of M 115 are 4 credits; they are offered Autumn and Spring and require consent of instructor.

Gen Ed Attributes: Math Competency Course

### **M 118 - Mathematics for Music Enthusiasts. 3 Credits.**

Offered autumn and/or spring. Prereq. M 090 with a grade of B- or better, or M 095, or ALEKS placement  $\geq 3$ , or M01-Maplesoft Arithmetic score  $\geq 18$ , or ACT score of 22, or SAT score of 520; and elementary music background. An introduction to the interplay between mathematics and music. Course intended for Music majors/minors, and others with musical backgrounds/interests, who wish to satisfy the general education mathematics requirement.

Gen Ed Attributes: Math Competency Course

### **M 121 - College Algebra. 3-4 Credits.**

Offered every term. Prereq., M 095 or ALEKS placement  $\geq 4$  or M02-Maplesoft Algebra score  $\geq 14$ . The central theme of College Algebra is functions as models of change. This course fulfills the prerequisites for M 122 (College Trigonometry) and for M 162 (Applied Calculus). Intended to strengthen algebra skills. The study of functions and their inverses; polynomial, rational, exponential, and logarithmic functions. Credit not allowed for both M 121 and M 151. Co-Requisite Support sections of M 121 are 4 credits; they are offered Autumn and Spring with prereq., one of the following: M01 = 16; M02 = 10; completion of the EdReady M095 Module; ACT/Math = 22; Old SAT Math = 520; New SAT Math = 27.5; if the student is fresh out of high school, completion of Algebra II or beyond; or Consent of Instructor.

Gen Ed Attributes: Math Competency Course

### **M 122 - College Trigonometry. 3 Credits.**

Offered autumn and spring. Prereq., M 121 or ALEKS placement  $\geq 4$ . Preparation for calculus based on college algebra. Review of functions and their inverses. Trigonometric functions and identities, polar coordinates and an optional topic such as complex numbers, vectors or parametric equations. Credit not allowed for both M 122 and M 151.

Gen Ed Attributes: Math Competency Course

### **M 132 - Numbers and Operations for Elementary School Teachers. 3 Credits.**

Offered autumn and spring. Prereq., M 095 or M 115, or ALEKS placement  $\geq 4$  or M02-Maplesoft Algebra score  $\geq 14$ . The study of number and operations for prospective elementary and middle school teachers, including whole numbers, decimals, fractions, percent, integers, operations, numeration systems, and problem solving.

Gen Ed Attributes: Math Competency Course

### **M 133 - Geometry and Measurement for Elementary School Teachers. 3 Credits.**



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Offered autumn and spring. Prereq., M 132. The study of geometry and geometric measurement for prospective elementary and middle school teachers, including synthetic, transformational, and coordinate geometry, constructions, congruence and similarity, 2-dimensional and 3-dimensional measurement, and problem solving.

Gen Ed Attributes: Math Competency Course

### **M 140 - College Math For Healthcare. 3 Credits.**

Offered autumn and spring at Missoula College. This course is designed to provide students with a solid mathematical foundation necessary to succeed in a health care profession. This course will review algebra, systems of measurement, ratio and proportions, basic probability and statistics concepts, and Ionic solutions and pH calculations. This course will apply mathematical reasoning and problem solving as it applies to the healthcare field.

### **M 151 - Precalculus. 4 Credits.**

Offered autumn and spring. Prereq., ALEKS placement  $\geq 4$  or M02-Maplesoft Algebra score  $\geq 17$ . A one semester preparation for calculus (as an alternative to M 121 - M 122. Functions of one real variable are introduced in general and then applied to the usual elementary functions, namely polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, and miscellaneous others. Inverse functions, polar coordinates and trigonometric identities are included. Credit not allowed for both M 151 and M 121 or M 122.

Gen Ed Attributes: Math Competency Course

### **M 162 - Applied Calculus. 4.000 Credits.**

Offered autumn and spring. Prereq., ALEKS placement  $\geq 5$  or M02-Maplesoft Algebra score  $\geq 19$  or M03-Maplesoft Calculus score  $\geq 10$  or one of M 121, M 122 or M 151. Introductory course surveying the principal ideas of differential and integral calculus with emphasis on applications and computer software. Mathematical modeling in discrete and continuous settings. Intended primarily for students who do not plan to take higher calculus.

Gen Ed Attributes: Math Competency Course

### **M 171 - Calculus I. 4 Credits.**

Offered autumn and spring. Prereq., M 122 or M 151 or ALEKS placement  $\geq 5$  or M03-Maplesoft Calculus score  $\geq 15$ . Differential calculus, including limits, continuous functions, Intermediate Value Theorem, tangents, linear approximation, inverse functions, implicit differentiation, extreme values and the Mean Value Theorem. Integral Calculus including antiderivatives, definite integrals, and the Fundamental Theorem of Calculus.

Gen Ed Attributes: Math Competency Course

### **M 172 - Calculus II. 4 Credits.**

Offered autumn and spring. Prereq., M 171 or M 181. Techniques of Integration. Area computations. Improper integrals. Infinite series and various convergence tests. Power series. Taylor's Formula. Polar coordinates. Parametric curves.

Gen Ed Attributes: Math Competency Course

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### **M 181 - Honors Calculus I. 4 Credits.**

Offered intermittently in autumn. Prereq., M 122 or M 151 or ALEKS placement  $\geq 5$  or M03-Maplesoft Calculus score  $\geq 15$ . Honors version of M 171.

Gen Ed Attributes: Math Competency Course

### **M 182 - Honors Calculus II. 4 Credits.**

Offered intermittently in spring. Prereq., M 181 or consent of instr. Honors version of M 172.

Gen Ed Attributes: Math Competency Course

### **M 191 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **M 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **M 210 - Introduction to Mathematical Software. 3 Credits.**

Offered spring. Prereq., one of M 162, M 171, or M 181, or consent of instr. Software packages useful for doing and writing mathematics. Introduction to a computer algebra system (such as Maple or Mathematica), a numerical package (such as MATLAB or R), and elementary programming. Writing and communicating mathematics using the mathematical typesetting system LaTeX.

Gen Ed Attributes: Math Competency Course

### **M 221 - Introduction to Linear Algebra. 4 Credits.**

Offered autumn and spring. Prereq., M 172 or M 182. Vectors in the plane and space, systems of linear equations and Gauss-Jordan elimination, matrices, determinants, eigenvalues and eigenvectors, vector spaces, linear transformations. Calculators and/or computers used where appropriate.

Gen Ed Attributes: Math Competency Course

### **M 225 - Introduction to Discrete Mathematics. 3 Credits.**

Offered autumn. Prereq., one of M 162, M 171, or M 181 or consent of instr. Mathematical concepts used in computer science with an emphasis on mathematical reasoning and proof techniques. Elementary logic, sets, functions and relations, combinatorics, mathematical induction, recursion and algorithms. Mathematics majors should take M 307 instead of M 225.

Gen Ed Attributes: Math Competency Course

### **M 234 - Higher Mathematics for Elementary School Teachers. 3 Credits.**

Offered autumn and spring. Prereq., M 132. The study of algebra, number theory, probability and statistics for prospective elementary and middle school teachers, including proportional reasoning, functions, elementary number theory, statistical modeling and inference, and elementary probability theory.

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Gen Ed Attributes: Math Competency Course

### **M 263 - Applied Differential Equations. 3 Credits.**

Offered spring. Prereq., one of M 162, M 171 or M 181 and knowledge of basic trigonometry. Solution of ordinary differential equations and systems with emphasis on applications, numerical methods and computer software.

Gen Ed Attributes: Math Competency Course

### **M 273 - Multivariable Calculus. 4 Credits.**

Offered autumn and spring. Prereq., M 172 or M 182. Calculus of functions of several variables; differentiation and elementary integration. Vectors in the plane and space.

Gen Ed Attributes: Math Competency Course

### **M 274 - Introduction to Differential Equations. 3 Credits.**

Offered autumn. Prereq., M 273. Ordinary differential equations. Systems of linear differential equations from a matrix viewpoint. Series solutions. Existence and uniqueness for initial value problems. Numerical methods. Stability and selected topics. M 275 computer lab recommended.

Gen Ed Attributes: Math Competency Course

### **M 275 - Differential Equations Computer Lab. 1 Credit.**

Offered autumn. Coreq., M 274 or consent of instr. Intended primarily for student in M 274.

### **M 291 - Special Topics. 1-3 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **M 292 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course.

### **M 294 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr.

### **M 295 - Practicum. 1-6 Credits.**

### **M 300 - Undergraduate Mathematics Seminar. 1 Credit.**

(R-3) Offered every semester. Prereq., M 171 or M 181. Discussion seminar focused on topics and issues of interest to students in the mathematical sciences. Course graded only on CR/NCR basis.

### **M 301 - Teaching Mathematics with Technology. 3 Credits.**

Offered autumn, odd-numbered years. Prereq., M 162 or M 171 or consent of instructor. Discrete and continuous mathematical models from a variety of disciplines using appropriate technology.

### **M 307 - Introduction to Abstract Mathematics. 3 Credits.**

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Offered autumn and spring. Prereq., M 172 or M 182. Designed to prepare students for upper-division proof-based mathematics courses. Topics include proof techniques, logic, sets, relations, functions and axiomatic methods. Students planning to take both M 221 and M 307 are encouraged to take M 221 first.

### **M 325 - Discrete Mathematics. 3 Credits.**

Offered intermittently. Prereq., M 171 and M 225 or M 307. Continuation of M 225 and topics from graph theory, Boolean algebras, automata theory, coding theory, computability and formal languages.

### **M 326 - Number Theory. 3 Credits.**

Offered spring. Prereq., M 225 or M 307. Congruences, Diophantine equations, properties of primes, quadratic residues, continued fractions, algebraic numbers.

### **M 361 - Discrete Optimization. 3 Credits.**

Offered spring. Prereq., one of M 162, M 172 or M 182 (M 221 or M 225 recommended). Intended for non-mathematics majors as well as mathematics majors. Introduction to discrete optimization and modeling techniques with applications. Topics from combinatorics and graph theory, including enumeration, graph algorithms, matching problems and networks.

### **M 362 - Linear Optimization. 3 Credits.**

Offered autumn. Prereq., one of M 162, M 172 or M 182 (M 221 recommended). Coreq., M 363 recommended. Intended for non-mathematics majors as well as majors. Introduction to linear programming and modeling techniques with applications. Topics include the simplex method, duality, sensitivity analysis and network models.

### **M 363 - Linear Optimization Laboratory. 1 Credit.**

Offered autumn. Coreq., M 362. Introduction to linear optimization software.

### **M 381 - Advanced Calculus I. 3 Credits.**

Offered autumn . Prereq., M 307. Rigorous development of single-variable calculus with formal proof. Functions, sequences, limits, continuity, differentiation, and integration.

### **M 391 - Special Topics. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **M 392 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course.

### **M 394 - Seminar. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr.

### **M 398 - Internship. 1-6 Credits.**

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Offered autumn and spring. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **M 412 - Partial Differential Equations. 3 Credits.**

Offered spring. Prereq., M 274. Fourier series, Sturm-Liouville and boundary value problems. Partial differential equations: Cauchy problems and the method of characteristics, separation of variables and Laplace transform methods. Numerical methods and selected topics. M 418 computer lab recommended. Level: Undergraduate-Graduate

### **M 414 - Deterministic Models. 3 Credits.**

Offered spring. Prereq., M 263 or M 274 or consent of instr. Linear and nonlinear difference and differential equations: stability, phase-plane analysis, oscillatory behavior, limit cycles, and chaos. Eigenvalues and eigenfunctions. Emphasis on models in biology. Level: Undergraduate-Graduate

### **M 418 - Partial Differential Equations Computer Lab. 1 Credit.**

Offered spring. Coreq., M 412 or consent of instr. Intended primarily for students in M 412. Level: Undergraduate-Graduate

### **M 429 - History of Mathematics. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, one intermediate writing course and M 307. Historical study of the development of mathematics from the Egyptian and Babylonian eras to the 20th century. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **M 431 - Abstract Algebra I. 4 Credits.**

Offered autumn. Prereq., M 221 and M 307 or consent of instr. An introduction to modern ideas of algebra through the study of groups, rings, and fields. Level: Undergraduate-Graduate

### **M 432 - Abstract Algebra II. 4 Credits.**

Offered spring. Prereq., M 431. Continues the investigation of groups, rings, and fields begun in M 431. Further topics include vector spaces and field extensions. Level: Undergraduate-Graduate

### **M 439 - Euclidean and NonEuclidean Geometry. 3 Credits.**

Offered autumn. Prereq., M 307. Euclidean geometry from a rigorous, axiomatic viewpoint and Non-Euclidean geometries chosen from Lobachevskian, projective, finite and Riemannian. Level: Undergraduate-Graduate

### **M 440 - Numerical Analysis. 3 Credits.**

Offered in Autumn. Prereq., M 221, M 274, and some experience with computer programming. Topics include: error analysis; approximation and interpolation; numerical solution of linear and non-linear equations; numerical optimization; numerical integration of ordinary and partial differential equations; and applications. Co-convenes with M 540. Level: Undergraduate

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### **M 445 - Statistical, Dynamical, and Computational Modeling. 4 Credits.**

Offered autumn odd-numbered years. Prereq., consent of instr. An interdisciplinary course on the integration of statistical and dynamical models with applications to biological problems. Linear and nonlinear models, estimation, systems of ordinary differential equations, numerical integration, bootstrapping, MCMC methods. Intended both for students in mathematics and the natural sciences. Level: Undergraduate-Graduate

### **M 461 - Data Science Analytics. 3 Credits.**

Offered autumn. Prereq., STAT 341, and one of M 221 or M 273, or consent of instructor. This is a methods course supporting the Big Data Certificate Program. The course provides the students with the essential tools of data analytics. The content consists of data dictionaries and data mappings, distributed computing, and related methods. Other topics may include data visualization, regression, and cluster analysis. This course may be used to satisfy the course requirements of the Big Data Certificate Program. Level: Undergraduate. Co-convenes with M 561.

### **M 462 - Theoretical Basics of Big Data Analytics and Real Time Computation Algorithms. 3 Credits.**

Offered spring. Prereq., M 221 and two other Mathematics / Statistics classes at the 200-level or above, or consent of instr. The main goal of this course is to provide students with a unique opportunity to acquire conceptual knowledge and theoretical background behind mathematical tools applicable to Big Data Analytics and Real Time Computations. Specific challenges of Big Data Analytics, e.g., problems of extracting, unifying, updating, and merging information, and processing of highly parallel and distributed data, will be reviewed. The tools for Big Data Analytics, such as regression analysis, linear estimation, calibration problems, real time processing of incoming (potentially infinite) data, will be studied in more detail. It will be shown how these approaches can be transformed to conform to the Big Data demands. Co-convenes with M 562. Level: Undergraduate

### **M 467 - Data Science Projects. 3 Credits.**

Offered spring. Prereq., two courses chosen from STAT 341, M 221 and M 273, and one of M 461 or M 462, or consent of instructor. This course is a practicum course aimed at developing skills needed to solve data science problems facing industry and academics. Problems are brought to the class by local technology-oriented businesses and university researchers. Lecture topics include project management, interacting with clients, and written and oral presentation of results. Additional lecture topics will be selected to address the specific problems brought to the class and may cover data reduction methods, algorithm design and predictive analytics. Level: Undergraduate. Co-convenes with M 567.

### **M 472 - Introduction to Complex Analysis. 4 Credits.**

Offered spring. Prereq., M 273, M 307. Analytic functions, complex integration, singularities and application to contour integration, harmonic functions, spaces of analytic functions. Level: Undergraduate-Graduate

### **M 473 - Introduction to Real Analysis. 4 Credits.**

Offered autumn odd-numbered years. Prereq., M 273 and M 307. Theory of metric spaces and point set topology, Riemann-Stieltjes integral, sequences and series of functions. Stone-Weierstrass theorem, theorem of Arzela-Ascoli, introduction to Lebesgue integration. Level: Undergraduate-Graduate

### **M 485 - Graph Theory. 3 Credits.**

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Offered autumn. Prereq., M 325, or M 307 and M 361, or consent of instr. Theory and applications of graphs. Topics chosen from trees, matchings, connectivity, coloring, planarity, Ramsey theory, random graphs, combinatorial designs and matroid theory. Level: Undergraduate-Graduate

### **M 490 - Undergraduate Research. 1-4 Credits.**

(R-12) Offered every term. Prereq., consent of instr. Undergraduate research in the mathematical sciences under the direction of a faculty member. Graded credit/no credit.

### **M 491 - Special Topics. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Undergraduate-Graduate

### **M 492 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course

### **M 494 - Seminar. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr.

### **M 498 - Internship. 1-6 Credits.**

Offered autumn and spring. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **M 499 - Senior Thesis. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course and consent of instr. Senior thesis for mathematics majors and/or Watkins Scholars.

Gen Ed Attributes: Writing Course-Advanced

### **M 500 - Current Mathematical Curricula. 3 Credits.**

Offered intermittently. Prereq., teacher certification and Math graduate majors only or consent of instructor. Analysis of contemporary materials for secondary school mathematics: the goals, the mathematical content, alternative methodologies, and curriculum evaluation. Level: Graduate

### **M 501 - Technology in Mathematics for Teachers. 3 Credits.**

Offered intermittently. Prereq., teacher certification or consent of instructor. Technology usage when it is appropriate and when it is not. Experience is provided with scientific calculators, graphing utilities, computers, and identification of exemplary software. Level: Graduate

### **M 504 - Topics in Mathematics Education. 1-12 Credits.**

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(R-12) Offered intermittently. Prereq., teacher certification. Topics of current interest which may include calculus, number theory, probability and statistics, geometry, or algebra, at a level suitable for teachers. Level: Graduate

### **M 510 - Problem Solving for Teachers. 3 Credits.**

Offered intermittently. Prereq., teacher certification or consent of instructor. Strategies for problem solving, problem posing in a variety of situations, modeling and applications. Problems are selected from various areas of mathematics. Level: Graduate

### **M 511 - Advanced Mathematical Methods I. 3 Credits.**

Offered autumn odd-numbered years. Prereq., M 274, and M 412 or M 414. Methods in applied mathematics related to the qualitative and quantitative solution of nonlinear and differential integral equations, dynamical systems, and perturbation methods. Applications of these methods to other sciences. Level: Graduate

### **M 512 - Advanced Mathematical Methods II. 3 Credits.**

Offered spring even-numbered years. Prereq., M 511. Continuation of M 511. Level: Graduate

### **M 514 - Topics in Applied Mathematics. 1-12 Credits.**

(R-12) Offered autumn even-numbered years. Prereq., consent of instr. or M 511 and M 512. Topics of current interest in applied mathematics, mathematical modeling, dynamic modeling, and optimal management in stochastic or deterministic environments. Level: Graduate

### **M 521 - Advanced Algebra I. 3 Credits.**

Offered alternate years in autumn. Recommended prereq., M 432 or consent of instr. Topics covered include group theory, field theory and Galois theory. Level: Graduate

### **M 522 - Advanced Algebra II. 3 Credits.**

Offered alternate years in spring. Prereq., M 521 or consent of instr. Continuation of M 521; rings, modules, commutative algebra, and further topics. Level: Graduate

### **M 524 - Topics in Algebra. 3 Credits.**

(R-12) Offered alternate years in autumn and/or spring. Prereq., consent of instr. Topics chosen from algebra and related areas, for example from commutative algebra, algebraic geometry, linear algebra, group theory, ring theory, or number theory. Level: Graduate

### **M 531 - Topology. 3 Credits.**

Offered autumn even-numbered years. Prereq., M 473 or consent of instr. Set theory, topological spaces, metrizable, continuous mappings and selected topics. Level: Graduate

### **M 532 - Algebraic Topology. 3 Credits.**

Offered spring alternate years. Prereq., M 431 and M 531 or consent of instr. Introduction to algebraic topology through one or more topics chosen from the fundamental group and higher homotopy groups, singular homology, and simplicial homology. Level: Graduate



**M 540 - Numerical Methods for Computational & Data Science. 3 Credits.**

Prereq., M 221, M 274, and some experience with computer programming. Topics include: error analysis; approximation and interpolation; numerical solution of linear and non-linear equations; numerical optimization; numerical integration of ordinary and partial differential equations. This course will focus specifically on techniques from numerical analysis that have applications in modern computational and data science. Students will be expected to learn the theoretical underpinnings of the methods they use, as well as to implement the methods in computer code. Co-convenes with M 440. Level: Graduate

**M 551 - Real Analysis. 3 Credits.**

Offered spring even-numbered years. Prereq., M 473 or M 472 or consent of instr. Measure theory, abstract integration theory, theory of  $L_p$ -spaces. Level: Graduate

**M 555 - Functional Analysis. 3 Credits.**

Offered spring odd-numbered years. Prereq., M 473 or M 472 or consent of instr. Normed linear spaces, linear functionals, separation theorems, topological linear spaces, weak topologies, dualities. Level: Graduate

**M 561 - Advanced Data Science Analytics. 3 Credits.**

Offered autumn. Prereq., STAT 341 or STAT 421 and at least two upper division math courses. Topics include: data mappings and data reduction, scalable algorithms and associative statistics, Hadoop and MapReduce, data visualization, linear regression methods, healthcare analytics and cluster analysis. Level: Graduate. Co-convenes with M 461.

**M 562 - Advanced Theoretical Big Data Analytics. 3 Credits.**

Offered spring. Prereq., M 540 and M 561. Topics include: The notion of canonical information, linear experiment and optimal estimation problem, manipulating information in different forms: raw vs. explicit vs. canonical, Gauss-Markov theorem, calibration problem; real time signal processing with finite and infinite field of view. time series processing; balancing estimation accuracy, delay and computational demands. Image processing with infinite field of view; parallel processing of signals and images. Co-convenes with M 462. Level: Graduate

**M 564 - Topics in Analysis. 3 Credits.**

(R-12) Offered autumn odd-numbered years. Prereq., consent of instr. Research projects or topics in analysis. May include but not restricted to Banach algebras, Fourier analysis, Harmonic analysis, Hilbert space theory, integral equations, or operator theory. Level: Graduate

**M 567 - Advanced Big Data Analytics Projects. 3 Credits.**

Offered spring. Prereq., two courses chosen from STAT 341, M 221 and M 273, and one of M 461 or M 462. In this course, local businesses and University researchers will contribute practical problems from data science to the class. Students will learn how to work in teams to develop solutions to the contributed problems, graduate students will serve as lead investigators on these teams. Learning outcomes include: Develop data reduction algorithms for complex problems and varied data. Apply mathematical, statistical, and computational methods used in solving big data problems. Extend and adapt core algorithms to specific problems. Work with a client towards understanding client objectives and meeting the objectives. Propose alternative paths towards the solution when necessary. Plan a project (determine what is realistic and

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achievable within a time frame). Document progress and elicit feedback from clients. Write concise and focused progress reports. Efficiently allocate workload among team members. Effectively communicate and participate as a team member. Level: Graduate. Co-convenes with M 467.

### **M 570 - Calculus for Teachers. 3 Credits.**

Offered online in even-year summers. Prereq., teacher certification or consent of instr. Math knowledge for teaching concepts that support the learning of calculus across grades K-12. The content focus is differential and integral calculus. The pedagogical focus is teaching calculus concepts through active investigation and problem solving. Level: Graduate

### **M 572 - Algebra for Teachers. 3 Credits.**

Offered online in even-year summers. Prereq., teacher certification or consent of instr. Math knowledge for teaching algebra across grades K-12. The pedagogical focus is algebraic thinking and how it develops across the grades through problem solving. The content focus is algebraic number fields, functions, linear algebra, and polynomials. Level: Graduate

### **M 573 - Geometry For Teachers. 3 Credits.**

Offered online in odd-year summers. Prereq., teacher certification or consent of instr. Math knowledge for teaching geometry across grades K-12. The pedagogical focus is on geometric thinking and how it develops across grades K-12 through problem solving. The content focus is synthetic, analytic, vector, and transformational approaches to geometry. Level: Graduate

### **M 574 - Probability and Statistics for Teachers. 3 Credits.**

Offered online in odd-year summers. Prereq., teacher certification or consent of instr. Math knowledge for teaching probability and statistics across grades K-12. The pedagogical focus is on understanding statistical thinking and its development through statistical problem solving. The content focus is developing statistical models to answer statistical questions. Level: Graduate

### **M 581 - Combinatorics. 3 Credits.**

Offered autumn odd-numbered years. Prereq., consent of instr. Theory and applications of discrete mathematics. Topics chosen from enumeration, combinatorial analysis, and graph theory. Level: Graduate

### **M 582 - Optimization. 3 Credits.**

Offered autumn even-numbered years. Prereq., consent of instr. Theory and applications of optimization. Topics chosen from linear, non-linear, and discrete optimization, including duality theory, convexity and networks. Level: Graduate

### **M 584 - Topics in Combinatorics and Optimization. 3 Credits.**

(R-12) Offered spring odd-numbered years. Prereq., consent of instr. Topics chosen from the areas of combinatorics and optimization. May include classical problems, current trends, research interests or other topics chosen by the instructor. Level: Graduate

### **M 593 - Professional Project. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of advisor. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

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### **M 595 - Special Topics. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **M 596 - Independent Study. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **M 597 - Research. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **M 598 - Internship. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **M 599 - Thesis. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

### **M 600 - Mathematics Colloquium. 1-3 Credits.**

(R-3) Offered autumn and spring. Prereq., consent of advisor. Presentations of research topics in mathematics and related fields. Level: Graduate

### **M 602 - Teaching College Mathematics. 3 Credits.**

Prereq., second year standing in graduate school. Topics include publishing, grant writing, writing in mathematics classes, media use in mathematics, evaluation and assessment of curricular materials and programs, instructional methods in university mathematics courses, and other selected topics. Level: Graduate

### **M 605 - Learning Theories in Mathematics. 3 Credits.**

Prereq., graduate status. How children learn mathematical content and processes. Models of mental development, concept formation, problem solving, reasoning, and creative thinking. Level: Graduate

### **M 606 - Current Topics in the History of Mathematics. 3 Credits.**

Examination of mathematical history topics from the latter part of the 20th century. Discussions may focus on the impact of Hilbert's Problems. Research on current mathematics. Level: Graduate

### **M 609 - Research Methods in Mathematics Education. 3 Credits.**

Prereq., Consent of instr. Resources for learning of reported research, critical reviews of research, quantitative and qualitative processes. Level: Graduate

### **M 610 - Graduate Seminar in Applied Mathematics. 1-12 Credits.**

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(R-12) Offered autumn and spring. Prereq., consent of instr. A review and discussion of current research. Level: Graduate

### **M 620 - Graduate Seminar in Algebra. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **M 650 - Graduate Seminar in Analysis. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. A review and discussion of current research. Level: Graduate

### **M 680 - Graduate Seminar in Combinatorics and Optimization. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. A review and discussion of current research. Level: Graduate

### **M 690 - Supervised Internship. 1-12 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of department. Supervised Teaching Internship. Level: Graduate

### **M 691 - Practicum. 3 Credits.**

Prereq., consent of instr. Resources for learning of reported research, critical reviews of research, quantitative and qualitative processes. Level: Graduate

### **M 694 - Seminar. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

### **M 695 - Special Topics. 1-9 Credits.**

### **M 699 - Dissertation. 1-9 Credits.**

(R-9) Offered autumn and spring. Level: Graduate

## Media Arts (MART)

### **MART 100 - Fundamentals of eSports. 1 Credit.**

(R-4) Offered every term. Class meets on Mountain Campus in the U.C. Game Room. Explore the basics of various eSports including rules, concepts, strategies, and mechanics. Semester concludes with a gaming tournament. Students must bring their own headset for team play. Graded Credit/No Credit based on participation and attendance policy. Students may include up to, but not more than, 4 credits earned in MART 100 and all other ACT 100-179 activity courses in the total number of credits required for graduation.

### **MART 101L - Intro to Media Arts. 3 Credits.**

Offered autumn and spring. How do narrative and literary techniques manifest themselves in the media arts? Using the language of film as a starting point, students analyze storytelling through various media, including movies, television, the Internet, animation and video games.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **MART 102 - Digital Technology in the Arts. 3 Credits.**

Offered every term. An introduction to the relationship between aesthetics and the emerging capacities of digital technology. The course will explore the basic evolution of hardware, system software, and the Internet and will present a brief history of the pioneers of both traditional and digital art. It will also look at contemporary and emerging trends in the artistic application of digital technology.

### **MART 111A - Intro to Photoshop. 3 Credits.**

Offered every term. Online Course. This project-oriented design and compositing course introduces students to the fundamentals of Adobe Photoshop while focusing on artistic expression in a digital technology environment.

Gen Ed Attributes: Expressive Arts Course (A)

### **MART 112A - Introduction to Film Editing. 3 Credits.**

Offered autumn and spring. Study of the history, process and philosophy of narrative film/video editing.

Gen Ed Attributes: Expressive Arts Course (A)

### **MART 120 - Creative Coding I. 3 Credits.**

Offered autumn and spring. This course focuses on the fundamentals of programming and its connection to the creative and expressive possibilities of media art. Visual and scripting languages provide the foundation by which stories and games are created.

### **MART 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MART 201H - History of Digital Arts & Culture. 3 Credits.**

## University Of Montana

Offered every term. This course places current digital technologies within a historical context in order to understand and articulate how the digital world in which we live, and the tools with which we create, are connected to people, cultures and times before the latest innovations were even conceived. This knowledge will prepare students to engage with creative professionals across areas of expertise and to have a broader sense of their lives as citizens in a globally and historically connected world.

Gen Ed Attributes: Historical Studies

### **MART 214 - Digital Publishing & Design. 3 Credits.**

Offered autumn. Offered at Missoula College. A comprehensive foundation of layout and design principles to integrate digital media essential for effective print-based and web-based business publications.

### **MART 220 - Creative Coding II. 3 Credits.**

Offered intermittently. Prereq., MART 120. Building on the techniques, theory, and skills acquired in Creative Coding I, students create artworks and experiences focusing on physical computing. These include, but not limited to: Raspberry Pi, Arduino, Virtual Reality and Augmented Reality.

### **MART 232 - Interactive Web II. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Provides a background and foundation skills required for designing and implementing Web sites for public and private organizations. Marketing and design techniques are applied using state-of-the-art software.

### **MART 235 - Fundamentals of Type. 3 Credits.**

Offered every semester. This course is a study of the design and use of basic letterforms, anatomical features, hierarchy of information, major type families and characteristics, and the understanding of typographic grids. Students will learn the historical significance of letterforms and their origins to help fully understand how to use typography correctly within their works and designs. Students will gain experience in the art of typesetting and typographic layout, and learn the necessary skills for expressive typography, conceptual thinking and effective communication.

### **MART 245 - Introduction to the Language and Practice of Sonic Art. 3 Credits.**

Offered autumn. This course is intended as a foundation course to create shared terminology, skillsets, aesthetics, scientific understanding, and creative techniques of sonic art. Starting with the birth of electricity, Futurism, and Dada, students will examine the practices and innovations that led to the most current ideas about sound art, music, intermedia, and installation. Additionally, students will apply this knowledge to the creation of their own sonic art works.

### **MART 255 - Photoshop: Art and Design. 3 Credits.**

Offered spring. This project-based course explores a variety of design principles and techniques through Adobe Photoshop.

### **MART 256 - Illustrator: Vector and Layout Design. 3 Credits.**

Offered every term. An introduction to the basic principles and techniques of still image design and manipulation using Adobe Illustrator, the industry leading application for creating vector-based content. This project-based course demystifies the powerful Illustrator toolsets and workspace and enables students to actualize their ideas by helping them to develop an efficient production process. No prerequisites required.

## University Of Montana

### **MART 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MART 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MART 300 - Visions of Film. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. Study of major film theories that led to the constitution of visual film language and their application in contemporary film narrative and direction.

Gen Ed Attributes: Writing Course-Intermediate

### **MART 302 - Intro to Motion Design. 3 Credits.**

Offered autumn and spring. Prereq., Art and Media Arts majors only. This project-oriented course will introduce students to the basic technical and aesthetic components of digital motion design and 2D animation using the industry standard software programs Photoshop and After Effects.

### **MART 304 - Modern Horror Film. 3 Credits.**

Offered autumn and spring. This class explores the changing landscape of the horror film since 1960, studying the genre and its sociological importance through the language of cinema.

### **MART 305 - 3D Animation I. 3 Credits.**

Offered autumn. Prereq., Art and Media Arts majors only. This course is an introduction to fundamental concepts, principles, and practices of 3D digital modeling with Maya. Students will develop 3D modeling techniques, including production of geometric and organic objects. Through lectures, tutorials, in-class exercises and projects, students will be exposed to various techniques that may be used for innovative and artistic content such as filmic animation and compositing.

### **MART 323 - 3D Motion Design I. 3 Credits.**

Offered autumn. Prereq., Art and Media Arts majors only. Introduction to fundamental concepts, principles and practices of digital compositing and rendering in order to establish a common aesthetic and technical language necessary to develop quality time-based art and design.

### **MART 325 - Introduction to Animation. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. Introduction to two-dimensional digital animation, focusing on character and motion design animation fundamentals including: cell animation (frame by frame), motion-tweening, working with key frames and motion paths, moving elements on a 2D stage, object choreography and text animation.

### **MART 327 - Intro to Cinematography. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. Study of digital cinematography including color theory, composition, lens choice, continuity, camera movement/support, lighting for film and video, and grip in both studio and location situations.

**MART 330 - Principles of Sound Design. 3 Credits.**

Offered autumn. Prereq., Art and Media Arts majors only. Introduction to fundamental concepts, principles and practices of digital sound recording and editing in order to establish a common aesthetic and technical language necessary to develop quality audio design.

**MART 332 - Introduction to Film Scoring. 3 Credits.**

Prereq., Art, Media Arts and Music Majors only. Intro to Film Scoring focuses on the role of music in movies. It covers composition, orchestration, and dramatic techniques and how they integrate with the elements of dramatic action. Students will analyze iconic movies and scores and working with media arts film students, create two original film scores.

**MART 333 - 3D Animation II. 3 Credits.**

Offered spring. Building on the modeling skills learned in 3D Animation I, this course teaches students how to animate, texture map, add visual effects and render. The course will also cover advanced rigging techniques. As a continuation of this series, students will be introduced to animation, dynamics (including particle and fluid systems), and MEL scripting.

**MART 336 - Directing the Fiction Film. 3 Credits.**

Offered autumn. Prereq., Art and Media Arts majors only. Developing, directing and editing a five to seven minute fiction movie. In depth work on creation of shooting script, casting, work with actors and location work. Emphasis on collaborative process and diligence and preparation in all levels of production.

**MART 340 - Principles of Interactive Media. 3 Credits.**

Offered autumn and spring. Prereq., MART 120 and Art and Media Arts majors only. Introduction to interactive theory and art. This course is designed to help students gain the skill sets necessary to successfully create work in the constantly evolving arts environment. Installation-based works. Uses code and material.

**MART 341 - Intro to Web Design. 3 Credits.**

Offered every term. Online Course. Students will gain necessary skills in this introduction to the fundamentals of website structure, content design and navigation. Areas of focus will be directory structure, visual design, user navigation, audio/video integration and domain management. This course is open to all university students and geared to non-majors.

**MART 342 - Art & Science of Interactive Games. 3 Credits.**

Offer every term. Online course. This class is an introduction to the technological achievements and artistic and social impacts involved with the development of interactive games. It will cover the evolution of the gaming profile and the advanced visual, sonic and narrative properties that make interactive games the explosive growth industry that is today.

**MART 345 - Sound for Film. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. This course is targeted at the Digital Filmmaking student and introduces fundamental concepts, principles and practices of digital location sound recording and post-production editing to picture in order to establish a common aesthetic and technical language.



## University Of Montana

### **MART 355 - Experimental Documentary Media. 3 Credits.**

In this course, students will explore the state of contemporary documentary media through investigating new approaches to integrating narrative content in documentary, interactive documentary, avant-garde documentaries, sensory filmmaking, and experiments in collaborating with documentary subjects. The focus of this course is to expand students' understanding of the possibilities of the documentary genre. Selected films, film history and theory will encourage students toward a more expansive definition of documentary practice, while considering how they might create new work in documentary arts.

### **MART 360 - History, Ethics, and Games. 3 Credits.**

This theoretically based course explores a different aspect of gaming as it pertains to the history, the various theories, and the ethics surrounding gaming. As a seminar course, students gain an understanding of how gaming has evolved as well as the theory behind what makes games effective and the ethical questions that game developers face. Students will also gain experience examining the most current research in this area.

### **MART 361 - Serious Games. 3 Credits.**

This theoretically based course explores a different aspect of gaming as it pertains to serious games. As a seminar course, students gain an understanding of the serious gaming environment used in professional education and simulations. Students will also gain experience examining the most current research in this area.

### **MART 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MART 392 - Independent Study. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MART 395 - Practicum I. 3 Credits.**

Offered every term. This course offers the student the opportunity to apply their media arts skill sets and techniques to a variety of professional level projects that include movies, web site design, and still image design.

### **MART 398 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **MART 416 - Production Studio I. 3 Credits.**

Offered autumn. Prereq., Art and Media Arts major. Students create storyboards/previsuals, idea sketches and writing synopses, as well as identity and promotion of what will become finished works. Projects begun here will be continued in MART 457.

### **MART 420 - Sonic Programming. 3 Credits.**

## University Of Montana

Offered autumn. Prereq., MART 120. This course merges skills and technique of creative coding with the creation of sonic art works. The majority of the class is focused on the creation of dynamic sound-based art works, and the application of concepts from interactive theory and interactive systems.

### **MART 422 - Digital Compositing II. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. Combines the common aesthetic and technical language with solid motion design principles. Students immerse themselves in the making of a body of integrated-digital 2D and 3D work that explores the technical and aesthetic possibilities of multi-layered x y z plane actualizations.

### **MART 432 - Techniques of Film Scoring. 3 Credits.**

Offered intermittently. Prereq., MART 332. Focuses on the role of music in movies and expands upon the work accomplished in MART 332. It covers composition, orchestration, and harmonic techniques and integrates these with the elements of dramatic action. Students will work with media arts film students to actualize these techniques by creating original film scores of short scenes. The course will include a student project gallery, a peer review area, downloadable videos specific to the curriculum and a wide variety of online resources applicable to the subject matter.

### **MART 436 - Producing. 3 Credits.**

Offered intermittently. Students take on the creative role of the producer in making narrative films. The class covers everything from script choice and analysis through hiring, casting, budgeting, and all of the steps from pre-production to post-production in the delivery of a completed project. Included are guest lectures from industry professionals in key areas of the filmmaking profession.

### **MART 440 - Technology and Interactive Media Design. 3 Credits.**

Offered spring. Prereq., MART 340 and Art and Media Arts majors only. Advanced interactive media design class that builds on the foundation of principles taught in MART 340.

### **MART 441 - Web Technologies. 3 Credits.**

Offered autumn and spring. This online advanced web technologies course explores client-side scripting using HTML, CSS, JavaScript, and JQuery. Through the creation of complex interactive functions and user experiences students gain an understanding of the overall environment of web design technologies and a more integrated set of web design skills.

### **MART 445 - Sound for Digital Media. 3 Credits.**

Offered spring. Prereq., Art and Media Arts majors only. This course is targeted at the Integrated Digital Media student and introduces fundamental concepts, principles and practices of digital sound recording and editing. This will enable students to expand their aesthetic by integrating their sonic and visual creative work.

### **MART 450 - Topics in Film/Media Studies. 3 Credits.**

Offered autumn and spring. Prereq., Art and Media Arts majors only. Research and exploration of contemporary film, video, digital art and design. Focus on areas of student research both in commercial and non-commercial venues and styles.

Gen Ed Attributes: Writing Course-Advanced

## University Of Montana

### **MART 455 - Visions of Documentary Film. 3 Credits.**

Offered spring. Prereq, Art and Media Arts majors only. Class focuses on the study of different works of documentary filmmaking as well as the processes needed to succeed in the world on non-fiction storytelling. While studying films students will prepare and complete a short documentary film piece of their own.

### **MART 457 - Production Studio II. 3 Credits.**

Offered Spring. Prereq., Art and Media Arts Major. This course covers the principles and techniques of finishing projects. Students will focus on advanced rendering tools, prototype testing, installation and final performances, refined editing/titles/credits, enabling students to leave with a well polished finished project.

### **MART 460 - Game Engines. 3 Credits.**

This game programming course explores different game engines including but not limited to the Unity and Unreal Game Engines. Through multiple design and programmatic experiences, students gain an understanding of the overall game programming environment and their technologies.

### **MART 461 - Web Server Technologies. 3 Credits.**

This advanced web technologies course explores server-side programming including but not limited to ASP.NET, C#, SQL Server, PHP, and MySQL. Through the creation of complex back end interactions and user experiences, students gain an understanding of the overall environment of web programming technologies and a better understanding of the web stack.

### **MART 462 - Mobile Game Programming. 3 Credits.**

This mobile game programming course explores different mobile game platforms and languages including but not limited to Android Studio with Java and Kotlin, XCode with Swift and Objective-C, and Visual Studio with Xamarin. Through many design and programmatic experiences, students gain an understanding of the mobile game programming environment and their technologies.

### **MART 491 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MART 492 - Independent Study. 1-6 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MART 495 - Practicum II. 3 Credits.**

Offered every term. This course offers the student the opportunity to apply their media arts skill sets and techniques to a variety of professional level projects that include movies, web site design, and still image design.

### **MART 499 - Senior Project. 3 Credits.**

(R-9) Offered spring. Prereq., Art and Media Arts Majors only. This capstone course gives the student an opportunity to create an integrated senior project which brings together all of the elements of their course of study.

## University Of Montana

### **MART 500 - Core Research: Digital Technology in the Arts. 4 Credits.**

Offered autumn. This course explores the relationship between aesthetics and the emerging capabilities of digital technology. It will cover the historical relationship between science and art up to the end of the 20th century and examine the methodology of critical artistic applications. Level: Graduate

### **MART 509 - Media Production II. 4 Credits.**

Offered spring. Continuation of production and post-production practices and techniques introduced in MAR 508. Level: Graduate

### **MART 510 - Core Research: Narrativity and Experiments in Media. 4 Credits.**

Offered spring. This course expands upon the research begun in MART 500 by exploring the development of emerging 21st century digital technologies and their impact on aesthetics in artistic production. Level: Graduate

### **MART 514 - Advanced Composite Tech. 4 Credits.**

Offered spring. This course continues the work begun in MART 422 by furthering the development of artistic principles and practices and culminates in an in-house presentation of graduate level motion design techniques. Level: Graduate

### **MART 515 - Digital Post-Production. 4 Credits.**

Offered spring. Study and application of the principles of editing narrative. Beginning with animated storyboards created from scenes written by the student, the class edits existing footage in action and dialogue scenes. Study of history of editing as well as analysis of classic editing techniques. Level: Graduate

### **MART 520 - Core Research: Peer Teaching. 2 Credits.**

This graduate seminar is designed for prospective graduate teaching assistants and will cover techniques and best practices for both in-class and online delivery. Level: Graduate

### **MART 525 - Compositing Applications II. 4 Credits.**

Offered spring. This course expands upon the work begun in MART 524 and culminates in a semester end public presentation. Level: Graduate

### **MART 530 - Core Research: Professional Presentation. 3 Credits.**

The purpose of this class is to develop a foundation for your professional media arts practice, to prepare you for seeking career, exhibition, and public presentation opportunities in the field. Level: Graduate

### **MART 578 - Graduate Studio. 1-6 Credits.**

(R-18) Offered every semester. Each semester students work on individual projects under the supervision of a faculty mentor. Each year begins and ends with a faculty and peer review of projects in progress. Level: Graduate

### **MART 580 - Principals of Cinematography. 4 Credits.**

## University Of Montana

Offered autumn. Intermediate study of digital cinematography including color theory, composition, lens choice, continuity, camera movement/support, lighting for film and video, and grip in both studio and location situations. Level: Graduate

### **MART 587 - Screenwriting II. 4 Credits.**

Offered spring. Continued work in screenwriting at an advanced level. Level: Graduate

### **MART 591 - Special Topics. 1-6 Credits.**

(R-12) Offered every term. This course offers the graduate student the opportunity to expand their media arts skill sets and techniques by working on a variety of professional level projects that include movies, web site design, and still image design. Level: Graduate

### **MART 595 - Graduate Practicum. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, and one-time offerings of current topics. Level: Graduate

### **MART 596 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **MART 597 - Research. 1-12 Credits.**

(R-12) Offered intermittently. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **MART 598 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **MART 601 - Final Portfolio Research. 3 Credits.**

Offered every semester. Investigation into subjects relevant to the development of the students Final Portfolio work. Application of qualitative research techniques, with a research presentation or paper due at the end of the semester. Level: Graduate

### **MART 680 - Film Directing IV. 4 Credits.**

Offered spring. Prereq., MART 578. Continued advanced work in directing, including the completion of a short film. Level: Graduate

### **MART 687 - Final Portfolio I. 1-12 Credits.**

Offered autumn. Ongoing production and content work relating to thesis projects. Level: Graduate

### **MART 688 - Media Practicum. 1-4 Credits.**

(R-12) Offered every term. Pursuit of Practical Experience in Media Arts projects both personal and Professional. Level: Graduate

## University Of Montana

### **MART 690 - Professional Practices. 3 Credits.**

(R-6) Offered every term. Work outside of program in an area of professional interest. Level: Graduate

### **MART 695 - Special Topics. 1-8 Credits.**

### **MART 698 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **MART 699 - Final Portfolio II. 1-12 Credits.**

Offered spring. Final work on thesis portfolio. Approval by the student's thesis committee is required for graduation. Level: Graduate

## Media Arts-Filmmaking (MAR)

### **MAR 210 - Creation of Media Story. 3 Credits.**

Offered autumn. Media Arts majors only. Preparatory to writing in visual story forms (screenplay, animation, games) students immerse themselves in writing and drawing improvisations through journaling and short project creation.

### **MAR 251 - Digital Video Production Technology. 3 Credits.**

Offered autumn. Prereq., major in Media Arts. A project-based class, students learn the use and application of filmmaking equipment, including cameras, lights and sound. Short film projects are produced to apply principles and work in various roles required for the completion of a fiction film.

### **MAR 252 - Screenwriting. 3 Credits.**

Offered spring. Prereq., Media Arts Major. Intermediate level writing class devoted to short films, with an emphasis on writing camera-ready scripts for production. Feature film structure and techniques are also introduced.

### **MAR 335 - Experimental Animation. 3 Credits.**

Offered Spring. This course focuses on the development and creation of experimental animation projects using traditional stop motion animation techniques such as hand drawn, silhouette, object and clay. Projects created in this class may have elements created using iStopmotion, Dragonframe and other digital capture platforms. Open to Media Arts majors only.

### **MAR 442 - Experimental Film. 3 Credits.**

Offered autumn. Media Arts majors only. Surveying a wide range of experimental cinema (film/video) from the 1920's to the present with the central focus being artistic practice in the context of historic and cultural concerns. Students will also create projects focusing on exploring film/video both as a form of personal expression and as a medium, rather than as mass entertainment.

### **MAR 443 - Documentary. 3 Credits.**

Offered autumn. Designed to bring together Film Studies students (theorists) and Media Arts students (filmmakers) so they may draw from their respective fields to collaborate on the production of documentaries. After exposure to both documentary history and criticism, students will be required to work with a team of producers in learning the basic skills involved in documentary production.

### **MAR 465 - Special Projects. 3 Credits.**

Offered autumn. Media Arts majors only. Focus on the production of short commercial works, including advertisements, industrial work, how to videos, as well as paper projects with potential clients. Students develop a DVD/Web portfolio for entry into the profession upon graduation. The class serves as a synthesis point for analysis and presentation of techniques and principles learned throughout the program.

### **MAR 470 - Advanced Acting for Film I. 3 Credits.**

## University Of Montana

Offered spring. Prereq., MART 416. Projects begun in MART 416 are finished here. Students focus on advanced rendering tools, prototype testing, installation and final performances, refined editing/titles/credits, enabling students to leave with a well-polished finished project.

### **MAR 471 - Advanced Acting for Film II. 3 Credits.**

Offered spring. A project-based course that combines actors and directors in the collaborative creation of a short fiction film.



## Metals & Machining Technology (MCH)

### **MCH 101 - Introduction to Manufacturing Processes. 1 Credit.**

Offered autumn. Offered at Missoula College. This course is designed to introduce the student with an overview of manufacturing to include engineering materials and product attributes, material removal processes, property enhancing and surface processing operations, special processes and assembly technologies, and manufacturing systems.

### **MCH 102 - Introduction to Manufacturing Materials. 2 Credits.**

Offered spring. Offered at Missoula College. This is an introductory course in the study of materials used in the manufacturing industry. Topics include selection and identification of steels, selection and identification of nonferrous metals, mechanical behavior of various plastics, hardening, case hardening, tempering, annealing, normalizing, stress relieving, and the use of the Rockwell and Brinell hardness testers.

### **MCH 112 - Related Metals Processes I. 1 Credit.**

Offered spring. Offered at Missoula College. Use of hand tools and machines which relate to the repair of heavy equipment. Instruction covers fasteners, layout, bench metal, threads and threading, drills and drilling, and tool sharpening.

### **MCH 114 - Related Metals Processes II. 3 Credits.**

Offered autumn. Offered at Missoula College. Instruction and use of drills, files, threads and threading processes, basic lathe, drill press, and band saw operation, including precision measuring instruments. Fasteners, layout procedures, and basic hand tools are covered.

### **MCH 115 - Related Metals Processes III. 3 Credits.**

Offered spring. Offered at Missoula College. A basic metalworking course covering fasteners, layout, bench metal, heat treating, threads and threading, drills and drilling, basic machining, and tool sharpening.

### **MCH 120 - Blueprint Reading & Interpretation for Machining. 3 Credits.**

Offered autumn. Offered at Missoula College. This course introduces the fundamental concepts necessary to interpret and make drawings with symbols, various schematics and diagrams, dimensioning techniques, section views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Interpretation of specifications and determination of acceptable tolerance requirements to ensure quality control measures for design parts will also be stressed.

### **MCH 122 - Introduction to CAM. 3 Credits.**

Offered spring. Offered at Missoula College. This course introduces Computer Aided Manufacturing (CAM) operational basics for both mill and lathe programming using current CAM software. The course includes terminology relevant to PC-based CAD/CAM work, hardware familiarity, system operation and management, folders, file type and structure, menu structure and use, and 3 axis (milling machines) and 2 axis (lathes) tool paths. Emphasis is placed on proper geometric creation, management, relevant utilities, and toolbar and menu functions.

### **MCH 125 - Introduction to CNC Lathes. 3 Credits.**

## University Of Montana

Offered spring. Offered at Missoula College. Prereq., MCH 132. This course provides opportunities for students to develop skills in the safe setup, maintenance, and operation of CNC lathes and related periphery tools and skills. Topics covered include CNC lathe parts, controls, tool holding, tool insert geometry, chip formation, speeds and feeds, operation and process planning, threads, fits, dimensioning and tolerances, surface finish, and the following lathe processes: facing, turning, tapering, drilling, boring, reaming, chamfering, grooving, parting-off, internal and external threading, tapering, and knurling. Graded projects based on chuck, collet, and fixturing will be done. Related periphery tooling, use and care of precision measuring tools, in addition to related math used in the trade, will also be covered.

### **MCH 127 - Introduction to CNC Mills. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., MCH 134. This course provides instruction in the setup and operation of CNC mills. Student projects include specialty tooling and multi-axis machining. Students will also gain experience in process control. Topics include specialty tooling, multi-axis machining, process control, and laboratory exercises in part production.

### **MCH 129 - Machine Quality Control and Precision Measurements. 3 Credits.**

Offered autumn. Offered at Missoula College. Students will develop the knowledge to analyze and evaluate the processes and methodology required in an industrial production environment to determine whether quality control standards are being met. Topics include use of non-precision measuring tools, use of precision measuring tools, use of comparison gauges, and analysis of measurements in a CNC environment.

### **MCH 130 - Machine Shop. 3 Credits.**

Offered spring. Offered at Missoula College. The course content covers a broad range of shop fundamentals in manual and CNC machining. This course includes an emphasis on shop and work area safety. Instruction covers standard shop work, such as measurement, layout, basic hand tools, drills, drill presses, and taps and dies. Use of pedestal grinder will be covered. Work assignments incorporate projects requiring use of the above machines, tooling, and emphasizes safety.

### **MCH 132 - Introduction to Manual Engine Lathes. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq./corereq., MCH 120 and MCH 129. This introduction to Manual Engine Lathes will cover the safety, maintenance and operation of manual engine lathes and related periphery tools and skills. Subjects covered include HSS tool bit grinding and tool bit geometry, chip formation, speeds and feeds, operation and process planning, threads, fits, dimensioning and tolerances, surface finish, and the following lathe processes: facing, turning, tapering, drilling, boring, reaming, chamfering, grooving, parting-off, internal and external threading, tapering, knurling, filing and polishing. Graded projects using between centers and chuck work turning will be done. Related periphery tooling, use and care of precision measuring tools, in addition to related math used in the trade, will also be covered.

### **MCH 134 - Introduction to Manual Mills. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq./co-req., MCH 120 and MCH 129. The student will perform advanced hands-on machine shop operations: set up and operation of manual milling machines, drill presses, band saws, grinders, and other equipment commonly found in manufacturing facilities. The student will use precision measuring tools and methods, utilize blueprints, and perform project process planning. Various types of steel and aluminum are use.

### **MCH 191 - Special Topics. 1-6 Credits.**

## University Of Montana

(R-6). Offered intermittently. Offered at Missoula College.

### **MCH 194 - Manufacturing Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Prereq., consent of instr. Guided study in a specialized workforce education area.

### **MCH 198 - Internship. 1-6 Credits.**

Offered at Missoula College. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **MCH 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College.

### **MCH 294- Manufacturing Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Prereq., consent of instr. Guided study in a specialized workforce education area.

## Military Science Leadership (MSL)

### **MSL 101 - Leadership and Personal Development. 3 Credits.**

Offered autumn. The Constitutional role of the military, military tradition, current defense posture, service roles and missions. An introduction to issues and competencies that are central to a commissioned officer's responsibilities. Establishes framework for understanding officership, leadership and army values.

### **MSL 102 - Intro to Tactical Leadership. 3 Credits.**

Offered spring. Establishes foundation of basic leadership fundamentals such as problem-solving, communications, goal setting and improving listening techniques. Introduction to the principles of military leadership and organizational values through discussion, observation and practice exercises.

### **MSL 106 - Army Physical Fitness. 1 Credit.**

(R?10) Offered autumn and spring. The study and application of military drill and ceremony: formation, ceremonies, and marching; the study of the fundamentals of the military physical conditioning program, and the practical application of skills learned. Physical education activity course; a maximum of four credits of activity courses may be counted toward graduation.

### **MSL 195 - Special Topics. 1-6 Credits.**

(R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MSL 201 - Innovative Team Leadership. 3 Credits.**

Offered autumn. Demonstration and practice of individual military leadership skills with emphasis on communication and observation through experiential learning exercises. Establishes framework for understanding of "life skills" such as physical fitness and time management. Examination and practical application of tasks training and military style briefings.

### **MSL 202 - Found of Tactical Leadership. 3 Credits.**

Offered spring. Building successful teams through influencing actions and effective communication in setting and achieving goals. Use of creativity in the problem solving process. Introduction of individual and team aspects of military tactics in small unit operations. Practical exercises in techniques for training others as an aspect of continued leadership development.

### **MSL 203 - Ranger Challenge. 2 Credits.**

(R?4) Offered autumn. Practical hands-on training in one rope bridge, land navigation, military weapons assembly/disassembly and physical conditioning. A team selected from this class will represent the University in competition against four other colleges and universities within the Big Sky Task Force. Students may include up to, but not more than, four credits earned in the HHP 100?179 and DANC 325 activity courses and MSL 203 and 315 in the total number of credits required for graduation. Students must be physically qualified and enrolled in an additional MSL academic class.

### **MSL 205 - American Military History. 3 Credits.**

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Offered autumn and spring. Describes the evolution of the American military land forces within the context of national historical development, industrialization, national security, and the United States' evolving international role and policies.

### **MSL 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MSL 295 - Special Topics. 1-6 Credits.**

(R-6) Offered spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MSL 296 - Leadership Practicum. 1-4 Credits.**

(R-4) Offered autumn and spring. Prereq., consent of instr. Intensive supervised study in applied leadership and management development in an organizational setting.

### **MSL 301 - Adaptive Team Leadership. 3 Credits.**

Offered autumn. Prereq., consent of instr. Coreq., MSL 303. Developing personal leadership principles through the learning and application of various small unit leadership procedures. Fundamentals of leadership development, land navigation, troop leading, small units tactics, rappelling, rifle marksmanship and physical fitness. Study of the organization and operation of the U.S. Army as a profession. Students are required to attend one weekend field exercise during the semester. Restricted to contracted Military Science students.

### **MSL 302 - Applied Team Leadership. 3 Credits.**

Offered spring. Prereq., consent of instr. Coreq., MSL 303. Continuation of the study and application of small unit leadership tasks. Advanced leadership skills taught including medical evacuation procedures, radio procedures, and increased involvement in planning and executing military operations in preparation for attendance at the Leader Development and Assessment Course at Fort Lewis, Washington. Students participate in rifle marksmanship instruction including qualification with the M16A2 rifle, rappelling, and attend one weekend exercise with students from regional universities in the area and the Montana Army National Guard. Restricted to contracted Military Science students.

### **MSL 303 - Leadership Laboratory. 1 Credit.**

(R-10) Offered autumn and spring. Prereq., consent of instr. Coreq., MSL 301, 302, 401, or 402. Practical application of skills learned in the classroom.

### **MSL 305 - Leadership Development and Assessment Course. 3 Credits.**

Offered every term. Prereq., consent of instr. Required study and internship in military tactics, leadership and organizational behavior. Supervised by active duty military officers. Participants attend course of study at Fort Knox, KY for four weeks of intense evaluation and training to assess their ability to serve as a 2nd LT in the US Army, US Army Reserves, or the National Guard.

### **MSL 391 - Special Topics. 1-9 Credits.**

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(R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MSL 401 - Adaptive Leadership. 3 Credits.**

Offered autumn. Prereq., consent of instr.; coreq., MSL 303. The application of leadership principles and techniques involved in leading young men and women in today's Army. Students explore training management. methods of effective staff collaboration and developmental counseling techniques. Develops student proficiency in planning and executing complex operations, functioning as a member of a staff and mentoring subordinates. Restricted to contracted Military Science students.

### **MSL 402 - Leadership in a Complex World. 3 Credits.**

Offered spring. Prereq., consent of instr., coreq., MSL 303. Study includes case study of military law and practical exercises on establishing an ethical command climate. Examines the role communications, values and ethics play in effective leadership. Students complete a semester long Senior Leadership Project that requires them to plan, organize, collaborate, analyze and demonstrate their leadership skills. Restricted to contracted Military Science students.

### **MSL 492 - Coop Education/Internship. 1-4 Credits.**

(R-4) Offered every term. Prereq., consent of instr. Required study and internship in military tactics, leadership and organizational behavior. Supervised by active duty military officers.

## Modern & Classical Literature - General (MCLG)

### **MCLG 300 - Language in the Real World: Introduction to Applied Linguistics. 3 Credits.**

Offered in the Autumn semester, every even numbered year. Many problems we encounter day-to-day have to do in one way or another with language. From addressing friends to writing academic texts, and from learning to write to using voice recognition technology to search the Internet, a lot of what we do in our private and professional lives has to do with language. Resolving language-related problems/issues in the real-world is a complex and dynamic task that requires not only knowledge about what language is and how it works, but also the use of interdisciplinary resources. Applied linguistics has developed into a problem driven and real-world based field that addresses language-based problems in real-world contexts. In this course you will explore language problems: (a) In human development and across the lifespan, (b) in education, (c) in society, and (d) in professional and institutional settings.

### **MCLG 315 - Major Hispanic Authors. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, and one intermediate writing course. The intensive study of the life times, and works of a major Hispanic author.

Gen Ed Attributes: Writing Course-Advanced

### **MCLG 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## Music (MUSI)

### **MUSI 101L - Enjoyment of Music. 3 Credits.**

Offered autumn and spring. The development of music listening skills. Exploration of the relationship between musical materials and the expressive qualities of a musical composition or performance. Concert attendance required. No musical background is expected. For non majors only. Credit not allowed for both MUSI 101L and 202L.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **MUSI 102A - Performance Study. 1-2 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Individual instruction in voice, piano, organ, harpsichord, carillon, string, wind and percussion instruments. All private instruction requires concurrent ensemble participation. A maximum of 6 credits is allowed in music performance.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 104A - Music Fundamentals. 3 Credits.**

Offered autumn. Basic principles of notation, including clefs, scales, intervals, chords and rhythm.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 105 - Music Theory I. 2 Credits.**

Offered autumn. Coreq., MUSI 140. Material and structure of music. Application of principles in two-, three-, and four-part writing and the keyboard.

### **MUSI 106 - Music Theory II. 2 Credits.**

Offered spring. Prereq., MUSI 105. Coreq., MUSI 141. Continuation of MUSI 105.

### **MUSI 108A - Orchestra: UMSO. 1 Credit.**

(R-8) Offered autumn and spring. Open to all University students by audition. Rehearsal and performing experience in a broad range of symphonic, choral, operatic and concerto repertoire in the University Orchestra and the Missoula Symphony.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 110A - Opera Theatre I. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instr. Study and performance of the standard opera repertoire.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 111A - Group Voice Class. 2 Credits.**

Offered autumn and spring. This course provides an introduction to the skills which enable and enhance healthy singing, including: proper vocal technique, performance skills, and artistic presentation. Course is taught in a group setting. Appropriate to all levels, students do not have to read music in order to succeed in



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this course.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 112A - Choir. 1 Credit.**

(R-8) Offered autumn and spring. Open to all University students. Audition places students according to appropriate ensemble and proper seating/section. Music majors refer to curricula for specific requirements.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 114A - Band: UM Concert Band. 1 Credit.**

(R-8) Offered autumn and spring. Major musical organizations open to all University students. Audition required for Symphonic Wind Ensemble.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 122A - Percussion Ensemble: UM. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instr. String, woodwind, brass, percussion, piano and vocal ensembles as appropriate to meet student needs.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 123A - World Percussion Ensemble. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instr. String, woodwind, brass, percussion, piano and vocal ensembles as appropriate to meet student needs.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 130L - History of Jazz. 3 Credits.**

Offered autumn. The development of jazz in the 20th century with emphasis on critical listening and the recognition of important trends and people in its history.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **MUSI 131A - Jazz Ensemble I: UM Jazz Bands. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instr. Study and performance of the jazz repertoire.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 132L - History of Rock & Roll. 3 Credits.**

Offered autumn and spring. A study of the roots, components, and development of the musical art form "Rock and Roll". Significant performing artists and movements with the style identified and presented. Includes traditional lecture with substantial use of audio and visual aids.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **MUSI 133 - Country Music: Cowboys, Opry, and Nashville. 3 Credits.**

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This course will explore the country music genre, including its major performers, songwriters, songs and impact on culture from the early times on the radio to the beginning of the twenty-first century.

### **MUSI 135A - Keyboard Skills I. 1 Credit.**

Offered autumn. Prereq., music majors or consent of instructor. Music reading, techniques, and harmonization skills acquired through study of solo and ensemble repertoire in a contemporary electronic piano laboratory.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 136A - Keyboard Skills II. 1 Credit.**

Offered spring. Prereq., MUSI 135A. Continuation of MUSI 135A.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 140 - Aural Perception I. 2 Credits.**

Offered autumn. Coreq., MUSI 105. A laboratory course in singing and dictation to supplement Theory I.

### **MUSI 141 - Aural Perception II. 2 Credits.**

Offered spring. Prereq., MUSI 140; coreq., MUSI 106. Continuation of MUSI 140.

### **MUSI 155A - Marching: Grizzly Marching Band. 1 Credit.**

(R-8) Offered autumn. A musical organization of brass, woodwinds, percussion, and auxiliary units open to all University students with no audition required.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 160A - Beginning Guitar. 2 Credits.**

Offered autumn. A beginning course in the fundamentals of playing folk guitar. Includes introduction to the rudiments of music.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 162A - Chamber Ensembles I. 1 Credit.**

(R-20) Offered autumn and spring. Prereq., consent of instr. String, woodwind, brass, percussion, piano and vocal ensembles as appropriate to meet student needs.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 180 - Composition I. 1-2 Credits.**

(R-4) Offered autumn and spring. Prereq., consent of instr. An introduction to the basic art of music composition. May be substituted for upper division electives for students not majoring in theory or composition.

### **MUSI 191 - Special / Experimental Courses. 1-9 Credits.**

(R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

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### **MUSI 192 - Independent Study. 1-3 Credits.**

(R-9) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **MUSI 195 - Applied Study I. 1-4 Credits.**

(R-12) Offered autumn and spring. Prereq., audition and consent of instr. Instruction in voice, piano, organ, string, wind and percussion instruments. Students entering MUSI 195 must show talent for solo performance and evidence of the equivalent of a minimum of four years prior study. All private instruction requires concurrent ensemble participation.

### **MUSI 202L - Intro to Music Literature. 3 Credits.**

Offered spring. Prereq., for non-majors consent of instr. A survey of representative examples of the standard music literature of the Western European tradition. Particular attention to musical styles and forms and their relationship to musical understanding and effective listening. A basic knowledge of music fundamentals is expected. Credit not allowed for both MUSI 101L and 202L.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **MUSI 205 - Music Theory III. 2 Credits.**

Offered autumn. Prereq., MUSI 106 and 141; coreq., MUSI 240. Continuation of MUSI 106.

### **MUSI 206 - Music Theory IV. 2 Credits.**

Offered spring. Prereq., MUSI 205; coreq., MUSI 241. This course is a continuation of MUSI 205, concentrating on, but not limited to, music as defined by and expressed in the Western European historical traditions from the Renaissance through the common practice period to the contemporary musical world in which we live.

### **MUSI 207X - World Music (equiv to 307). 3 Credits.**

Offered autumn and spring. Introduction to the diversity of music among the world's peoples. Selected music systems throughout the world examined in their broad cultural contexts: religious, historical, and social. Introduction to ethnomusicology—a combination of musicology, anthropology and other related disciplines.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **MUSI 218 - Instrumental Piano Classical (Honors). 1 Credit.**

Offered intermittently. Prereq., placement examination. Accelerated offering of the material covered in MUSI 235 and 236.

### **MUSI 225 - Jazz Theory & Improvisation I. 2 Credits.**

Offered autumn. A performance oriented course to provide a basic understanding of jazz harmony. Application of scales and melodic patterns in improvising over various harmonic progressions.

### **MUSI 226 - Jazz Theory & Improvisation II. 2 Credits.**

Offered spring. Prereq., MUSI 225. Continuation of MUSI 225.

### **MUSI 235 - Keyboard Skills III. 1 Credit.**

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Offered autumn. Prereq., MUSI 136A or equiv and music major or consent of instructor. Continuation of MUSI 136A.

### **MUSI 236 - Keyboard Skills IV. 1 Credit.**

Offered spring. Prereq., MUSI 235. Continuation of MUSI 235, culminates in piano functional examination.

### **MUSI 240 - Aural Perception III. 2 Credits.**

Offered autumn. Prereq., MUSI 106 and 141; coreq., MUSI 205. A lab course in singing and dictation to supplement Theory III.

### **MUSI 241 - Aural Perception IV. 2 Credits.**

Offered spring. Prereq., MUSI 240; coreq., MUSI 206. See MUSI 240.

### **MUSI 267A - Composer's Workshop. 1 Credit.**

This is a composition workshop and new music ensemble, in which student composers and performers collaborate, guided by a faculty composer, to develop new pieces.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 280 - Composition II. 1-2 Credits.**

(R-4) Offered autumn and spring. Prereq., 4 credits of MUSI 180. Original work in composition may be substituted for upper-division electives for students not majoring in theory or composition.

### **MUSI 281 - Diction: English, Italian. 2 Credits.**

Offered autumn even-numbered years. Introduced course participants to the International Phonetic Alphabet (IPA) with application to American English Diction and Italian Diction.

### **MUSI 282 - Diction: German & French (equiv 382). 2 Credits.**

Offered spring odd-numbered years. Applies IPA to French and German Diction and addresses other guidelines that apply to the lyric pronunciation of these languages. Students will transcribe, translate, recite, and sing German and French texts. This is a required course for BM vocal performance majors; MUSI 281 is the prerequisite course. Students who would like to be considered for mid-year registration in this diction series may do so only with the consent of the instructor.

### **MUSI 291 - Special / Experimental Courses. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings by visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MUSI 295 - Applied Study II. 1-4 Credits.**

(R-12) Offered autumn and spring. Prereq., audition and consent of instr. Continuation of 151. All private instruction requires concurrent ensemble participation.

### **MUSI 296 - Piano Professional Assessment. 0 Credits.**

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Repeat 8 times. All majors pursuing a B.M. or B.M.E. degree must successfully complete all sections of the Piano Proficiency Assessment in order to attain upper-division standing in music. The eight-part exam is administered at the end of each semester. Successfully completed assessments will receive a grade of CR.

### **MUSI 301H - Music History I. 3 Credits.**

Offered autumn. Prereq., MUSI 202L. The history of music in Western civilization from its origins to 1750 and its relationship to general cultural development. Introduction to basic research skills in music. Emphasis on listening for style characteristics through representative recorded repertoire.

Gen Ed Attributes: Historical Studies, Democracy and Citizenship (Y)

### **MUSI 302H - Music History II. 3.000 Credits.**

Offered spring. Prereq., MUSI 202L. The history of music in Western civilization from 1750 to modern times. See MUSI 301H.

Gen Ed Attributes: Historical Studies, Writing Course-Intermediate, Democracy and Citizenship (Y)

### **MUSI 304A - Sound in the Natural World. 3 Credits.**

Offered even-numbered years. This is a music composition and performance course that explores sound/music in relation to wilderness. Students will learn from cultures that have stayed in contact with their natural environment and will create compositions from materials collected in the field and will perform and critique them. As a result, students will become familiar with their own creative process.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUSI 308 - Orchestras II: UM. 1 Credit.**

Offered autumn and spring. Prereq., upper-division standing in instrument of participation. See MUSI 108A for description.

### **MUSI 310 - Opera Theatre II. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instr. See MUSI 131A for description.

### **MUSI 312 - Choir III. 1-8 Credits.**

Offered autumn and spring. Prereq., upper-division standing in voice. See MUSI 112A for description.

### **MUSI 314 - Band III: UM Concert Band. 1 Credit.**

Offered autumn and spring. Prereq., upper-division standing in instrument of participation. See MUSI 114A for description.

### **MUSI 322 - UM Percussion Ensemble. 1 Credit.**

Offered autumn and spring. Prereq., consent of instructor. See MUSI 122A.

### **MUSI 323 - World Percussion Ensemble. 1 Credit.**

Offered autumn and spring. Prereq., consent of instructor. See MUSI 122A.

### **MUSI 331 - Jazz Ensemble II: UM. 1 Credit.**

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(R-8) Offered autumn and spring. Prereq., consent of instr. See MUSI 131A for description.

### **MUSI 332 - Advanced Functional Piano. 1 Credit.**

Offered intermittently. Prereq., upper-division standing in music. Offered alternate years. Techniques of harmonization, transposition, sight-reading, modulation, and improvisation.

### **MUSI 333 - Practicum in Piano Pedagogy. 1-2 Credits.**

(R-4) Offered intermittently. Prereq. or coreq., MUSI 435, 436. Student teaching of young pianists.

### **MUSI 335 - Instrumental Conducting. 2 Credits.**

(R-4) Offered spring. Prereq., upper-division standing in music. Conducting methods and practice. Teaching methods and materials.

### **MUSI 336 - Choral Conducting. 2 Credits.**

(R-4) Offered autumn. Prereq., upper-division standing in music. A study of the techniques of choral conducting. Emphasis on issues encountered in various ensemble settings.

### **MUSI 342 - Vocal Repertoire I. 2 Credits.**

Offered autumn odd-numbered years. Prereq., upper-division standing in music. Comprehensive acquaintance with styles and interpretation in British, German, and possible additional repertoire genres.

### **MUSI 343 - Vocal Repertoire II. 2 Credits.**

Offered spring even-numbered years. Prereq., upper-division standing in music. Comprehensive acquaintance with styles and interpretation in American, French and possible additional genres.

### **MUSI 355 - Marching Band II: Grizzly. 1 Credit.**

(R-4) Offered autumn. Prereq., MUSI 155A or consent of instr. A musical organization of brass, woodwinds, percussion, and auxiliary units open to all University students.

### **MUSI 356 - Form & Analysis I. 2 Credits.**

Offered autumn. Prereq., upper-division standing in music. Detailed harmonic and formal analysis of representative works from the Baroque period to the present.

### **MUSI 357 - Form & Analysis II. 2 Credits.**

Offered spring. Prereq., upper-division standing in music and MUSI 356. Continuation of MUSI 356.

### **MUSI 362 - Chamber Ensemble III: UM. 1 Credit.**

(R-8) Offered autumn and spring. Prereq., consent of instructor. See MUSI 122A.

### **MUSI 380 - Composition III. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., upper-division standing in music and 4 credits in MUSI 280. Creative writing of music.

### **MUSI 388 - Concert Attendance UM. 0 Credits.**

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All music majors pursuing a B.M., B.M.E., or B.A. degree must attend in a minimum of 100 approved recitals/concerts prior to graduation. Students will receive recital credits each semester they are enrolled and should register for 388 the semester they apply for graduation. Successful completion of attendance requirements will be graded CR.

### **MUSI 391 - Special / Experimental Courses. 1-9 Credits.**

(R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MUSI 392 - Independent Study. 1-3 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MUSI 395 - Applied Study III. 1-4 Credits.**

(R-12) Offered autumn and spring. Prereq., upper-division standing in music and consent of instr. Continuation of MUSI 295. All private instruction requires concurrent ensemble participation.

### **MUSI 399 - Junior Recital. 1-2 Credits.**

Coreq., MUSI 395. Offered autumn and spring. Public performance guided by applied music faculty during the junior year of applied study. This recital, consisting of a minimum of 20 minutes of music, may be scheduled in conjunction with another student's junior recital. Co-Requisite: MUSI 395.

### **MUSI 407 - Counterpoint I. 3 Credits.**

Offered intermittently. Prereq., upper-division standing in music. Writing and analysis of contrapuntal styles through the 18th century.

### **MUSI 409 - String Pedagogy & Literature. 1-2 Credits.**

(R-4) Offered intermittently. Prereq., upper-division standing in music and consent of instr. Procedures and materials in class string instruction.

### **MUSI 411 - Woodwind Pedagogy. 2 Credits.**

Offered intermittently. Prereq., upper-division standing in music and consent of instr. Procedures and materials in individual and class instruction are discussed. Philosophies, repertoire, individual and group techniques used in teaching woodwinds.

### **MUSI 412 - Brass Pedagogy. 2 Credits.**

Offered intermittently. Prereq., upper-division standing in music and consent of instr. Procedures and materials in individual and class instruction are discussed. Philosophies, repertoire, individual and group techniques used in teaching brass instruments.

### **MUSI 413 - Percussion Pedagogy. 2 Credits.**

Offered intermittently. Prereq., upper-division standing in music and consent of instr. Procedures and materials in individual and class instruction are discussed. Philosophies, repertoire, individual and group techniques used in teaching percussion instruments.

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### **MUSI 415 - Music 20th Century to Present. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course, MUSI 302H and upper-division standing in music. Detailed analysis and comparison of selected instrumental, vocal and keyboard compositions of the 20th Century.

Gen Ed Attributes: Writing Course-Advanced

### **MUSI 416 - Topics in Music History. 3 Credits.**

(R-3) Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course, MUSI 302H and upper division standing in music or consent of instructor. Course materials will examine the development of musical styles, genres, forms and aesthetics important to Western music, introducing students to research methods in musicology.

Gen Ed Attributes: Writing Course-Advanced

### **MUSI 417 - Cultural Studies in Music. 3 Credits.**

(R-3) Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course, MUSI 302H and upper division standing in music, or consent of instructor. Course materials will examine music's contemporary role within cultures and societies around the world, introducing students to research methods in cultural studies and ethnomusicology.

Gen Ed Attributes: Writing Course-Advanced

### **MUSI 418 - Advanced Topics in Music Theory. 2 Credits.**

(R-4) Offered intermittently. Prereq., MUSI 206 and upper-division standing in music, or by consent of instructor. Special topics in advanced music theory and analysis. Level: Undergraduate-Graduate

### **MUSI 420 - Jazz Pedagogy. 3 Credits.**

Offered spring even-numbered years. Prereq., upper division or graduate standing in music or consent of instructor. Development of skills needed to rehearse and direct jazz ensembles at the middle school through high school level.

### **MUSI 432 - Keyboard Literature. 3 Credits.**

Offered autumn even-numbered years. Prereq., upper-division standing in music. Keyboard literature from the developments of the Baroque era to the contemporary period including the suite, sonata, character pieces, etc.

### **MUSI 433 - Keyboard Literature II. 3 Credits.**

Offered spring odd-numbered years. Continuation of MUSI 435.

### **MUSI 435 - Piano Methods & Materials I. 3 Credits.**

Offered autumn odd-numbered years. Prereq., upper-division standing in music or consent of instr. Methods and materials for teaching piano classes in public schools and private studios. Procedures in teaching beginning, intermediate and advanced students in private studios. Practical demonstrations and supervised laboratory experience with children's classes.



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### **MUSI 436 - Piano Methods & Materials II. 3 Credits.**

Offered spring even-numbered years. Prereq., MUSI 435. Continuation of MUSI 435.

### **MUSI 440 - Orchestration. 2 Credits.**

Offered autumn. Prereq., upper-division standing in music. Orchestrating and transcribing for orchestra and band instruments.

### **MUSI 442 - Vocal Studio Pedagogy and Lit. 2 Credits.**

Offered autumn odd-numbered years or spring even-numbered years. Prereq., upper-division standing in music. Procedures, philosophies and terminology used in the teaching of singing. Individual and group techniques.

### **MUSI 444 - Advanced Vocal Pedagogy. 3 Credits.**

Offered spring even-numbered years or as needed. Prereq., MUSI 442 or consent of instructor. A detailed examination of foundational vocal technique and science topics including respiration, phonation, resonance, and articulation. Offers students the opportunity to explore current topics in the field and how to approach them as a singer or voice teacher.

### **MUSI 467 - Composers' Workshop II. 1 Credit.**

Offered autumn and spring. Prereq., consent of instructor. See MUSI 122A.

### **MUSI 470 - Jazz Arranging & Composition. 3 Credits.**

Offered spring odd-numbered years. Prereq., upper division or graduate standing in music or consent of instructor. Composing and arranging for small to medium sized jazz ensembles. Rhythmic rewriting of melodies, re-harmonization techniques, arranging of pre-existing jazz compositions, and original compositions.

### **MUSI 480 - Composition IV. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., 3 credits in MUSI 380. A continuation of composition with writing in the larger forms.

### **MUSI 491 - Special / Experimental Courses. 1-9 Credits.**

(R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MUSI 492 - Independent Study. 1-3 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **MUSI 495 - Applied Study IV. 1-4 Credits.**

(R-12) Offered autumn and spring. Prereq., upper-division standing in music and consent of instr. Continuation of MUSI 395. All private instruction requires concurrent ensemble participation.

### **MUSI 499 - Senior Recital/Capstone Pjt. 1-4 Credits.**

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(R-4) Offered autumn and spring.

### **MUSI 500 - Secondary Perform Area. 1-2 Credits.**

(R-6) Offered every term. Prereq., audition and consent of instr. Continuation of MUSI 102A. Level: Graduate

### **MUSI 511 - Advanced Conducting. 2 Credits.**

(R-6) Offered intermittently. Prereq., MUSI 335/336 and consent of instr. Class and/or individual study of the art of conducting with emphasis on performance with university performing groups. Level: Graduate

### **MUSI 520 - Research in Music. 1-2 Credits.**

Offered autumn and summer. Prereq., graduate standing in music. Research problems: their statement, organization, techniques, tabulation of materials, and concepts necessary for interpretation of data. Development of a research proposal. Level: Graduate

### **MUSI 526 - Seminar in Instrumental Literature. 2 Credits.**

(R-4) Offered intermittently. Prereq., graduate standing in music. Concentrated study of symphonic literature or instrumental chamber music literature. Level: Graduate

### **MUSI 551 - Major Performance Area. 1-4 Credits.**

(R-12) Offered every term. Prereq., audition and consent of instr. Continuation of MUSI 495. Level: Graduate

### **MUSI 554 - Analytical Techniques I. 3 Credits.**

Offered autumn odd-numbered years. Prereq., graduate standing in music. A survey of the theoretical approach of leading composers from the polyphonic period to the present. Level: Graduate

### **MUSI 555 - Analytical Techniques II. 3 Credits.**

Offered spring even-numbered years. Prereq., MUSI 554. Continuation of MUSI 554. Level: Graduate

### **MUSI 559 - Composition. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Continuation of MUSI 480. Level: Graduate

### **MUSI 593 - Professional Projects. 1-4 Credits.**

(R-4) Offered intermittently. Prereq., graduate standing in music. Level: Graduate

### **MUSI 595 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **MUSI 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Students must have projects approved by a music faculty member before enrolling. Level: Graduate

### **MUSI 598 - Internship. 1-6 Credits.**

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(R?6) Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **MUSI 599 - Thesis. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., graduate standing in music. Level: Graduate

### **MUSI 699 - Dissertation. 1-12 Credits.**

Offered intermittently. Prereq., graduate standing in music. Level: Graduate

## Music-Education (MUSE)

### **MUSE 120 - Techniques: String Instruments in Classical Music I. 1 Credit.**

(R-2) Offered autumn. Group instruction for beginning students on violin, viola, cello and bass, with emphasis on teaching procedures.

### **MUSE 121 - Techniques: String Instruments in Classical Music II. 1 Credit.**

(R-2) Offered spring. Continuation of MUSE 120.

### **MUSE 123 - Techniques: Voice. 1 Credit.**

(R-2) Offered autumn. This course examines vocal function and issues associated with the physical processes of singing such as alignment, breathing, creating sound, amplifying (resonating) sound. Additionally, students will learn basic information about becoming a voice teacher (or choral director). Students will also learn about singers' diction, voice classification, and the appropriate assigning of solo classical repertoire.

### **MUSE 126 - Techniques: Percussion Instruments I. 1 Credit.**

(R-2) Offered autumn. Basic instruction in percussion instruments, with emphasis on teaching procedures.

### **MUSE 127 - Techniques: Percussion Instruments II. 1 Credit.**

(R-2) Offered spring. Prereq., MUSE 126. Continuation of MUSE 126. Basic instruction in percussion instruments, with emphasis on teaching procedures.

### **MUSE 272 - Techniques: Flute & Single Reed. 1 Credit.**

Composers are expected to bring new musical ideas, sketches, and eventually finished pieces to the workshop, while performers are expected to read, critique, practice, and finally perform the new works.

### **MUSE 273 - Techniques: Double Reed. 1 Credit.**

(R-2) Offered autumn. Basic instruction in oboe and bassoon, with emphasis on teaching procedures.

### **MUSE 274 - Techniques: Upper Brass. 1 Credit.**

(R-2) Offered autumn. Basic instruction in trumpet and horn, with emphasis on teaching procedures.

### **MUSE 275 - Techniques: Lower Brass. 1 Credit.**

Offered spring. Basic instruction in trombone, baritone, and tuba, with emphasis on teaching procedures.

### **MUSE 333 - General Music Methods & Materials I. 2 Credits.**

Offered autumn. Prereq., upper-division standing in music and C&I 200. Development of practical knowledge to effectively instruct and administer general music classes in the public schools, grades K-12.

### **MUSE 334 - General Music Methods & Materials II. 2 Credits.**

Offered spring. Prereq., upper-division standing in music and EDU 202. Continuation of MUSE 333.

### **MUSE 397 - Methods: K-8 Music. 2 Credits.**

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Offered autumn and spring. Prereq., C&I 200. Integration of fundamental skills and basic rudiments of music into the various aspects of teaching music creatively in the elementary school. For non-music majors only.

### **MUSE 425 - Technology and Materials. 2 Credits.**

Offered autumn semesters, as an elective. The course will provide in-depth examination of technology and print resources appropriate for use in music classrooms K-12, all areas and ensembles. Students will work independently and collaboratively to reflect upon, discuss, and practice utilizing technology and print resources for the music classroom (K-12).

### **MUSE 491 - Special Topics. 1-3 Credits.**

### **MUSE 492 - Independent Study. 1-3 Credits.**

### **MUSE 497 - Methods. 2 Credits.**

(R-4) Offered Spring. Prereq., upper-division standing in music and MUSE 123. Development of strategies for directing the secondary choral ensemble. Focus on rehearsal techniques and literature selection for the developing choir.

### **MUSE 521 - Psychology of Music. 2 Credits.**

Offered intermittently. Prereq., graduate standing in music. Investigation of the perception, processing and cognition of music. Psychological foundations of musical behavior: psychoacoustics, measurement and prediction of musical ability, functional music, music and society, music learning, and effective response to music. Level: Graduate

### **MUSE 522 - Philosophy of Music. 2 Credits.**

Offered intermittently. Prereq., graduate standing in music. An investigation of the meaning of music, the relationship to various societies and social structures and the leading philosophical ideas which relate to music and music instruction. Level: Graduate

### **MUSE 581 - Arts Education Institute. 2 Credits.**

(R-4) Offered summer. Same as ART 581, THTR 581. Open forum with national and regional speakers, panels, and symposia to promote discussion, understanding, and direction on significant national issues in the arts and arts education. Level: Graduate

### **MUSE 582 - Arts Education Seminar I. 1-2 Credits.**

(R-4) Same as CP 582. Offered summers. Topics vary. Level: Graduate

### **MUSE 583 - Arts Education Seminar II. 1-2 Credits.**

(R-4) Prereq., MUSE 582. Same as CP 583. Offered summers. Topics vary. Level: Graduate

### **MUSE 584 - Arts Education Seminar III. 1-2 Credits.**

(R-18) Prereq., MUSE 583. Same as CP 584. Continuation MUSE 583. Level: Graduate

### **MUSE 585 - Arts Education Seminar IV. 1-2 Credits.**

(R-4) Prereq., MUSE 584. Same as CP 585. Continuation of MUSE 584. Level: Graduate

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**MUSE 588 - Arts Education Apprenticeship. 1-3 Credits.**

(R-24) Offered summer. Same as CP 588. Exploration of art forms to develop new artistic and communicative perceptions and awareness. Level: Graduate

## Music-Technology (MUST)

### **MUST 110 - Digital Audio & Multitracking. 2 Credits.**

Offered autumn and spring. Composition of computer music through recording, editing, and processing sound with digital audio software. Study of the theory and application of digital audio recording, multitracking, and digital signal processing, and electroacoustic music history. Survey of historical and current electronic and computer music composers, pieces, and practices.

### **MUST 192 - Independent Study. 1-3 Credits.**

### **MUST 210 - Sequencing, Synthesis, Sampling. 2 Credits.**

Offered autumn. Prereq., MUST 110. Composition of computer music using MIDI sequencing, sampling, and synthesis software, and score preparation using music notation software. Study of the theory and application of MIDI, synthesis algorithms, and effects processing, and the practice of music engraving.

### **MUST 227A - Mountain Electroacoustic Laptop Ensemble I. 1 Credit.**

This is a new music workshop, in which student composers, guided by a faculty composer, collaborate on new pieces for electroacoustic ensemble. Each student will compose structured improvisations, scored with a combination of traditional and graphic notation, that the Mountain Electroacoustic Laptop Ensemble (MELEe) will perform, with their electric or amplified instruments, MIDI controllers, and laptop computers. Successful completion of MUST 310 is a prerequisite for taking this class, unless otherwise exempted by the instructor.

Gen Ed Attributes: Expressive Arts Course (A)

### **MUST 310 - Interactivity and Digital Signal Processing. 2 Credits.**

Offered spring. Prereq., MUST 210 and upper-division standing in music. Composition of interactive computer music using a graphical programming environment for MIDI, synthesis, and digital signal processing. Study of graphical programming, interactive composition and performance, generating and processing MIDI data, synthesizing computer-generated sound, and processing digital audio in real-time.

### **MUST 410 - Computer Music Programming. 2 Credits.**

Offered autumn. Upper-division standing in music. Composition of computer music through programming. Study of object oriented programming, synthesis and digital signal processing techniques, music-generating algorithms, sound spatialization, graphical user interface design, and external control.

### **MUST 427 - Mountain Electroacoustic Laptop Ensemble II. 1 Credit.**

Offered autumn and spring. Prereq., consent of instructor. See MUSI 122A.

### **MUST 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **MUST 492 - Independent Study. 1-3 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr.

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### **MUST 595 - Special Topics. 1-8 Credits.**

(R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **MUST 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Students must have projects approved by a music faculty member before enrolling. Level: Graduate



## Native American Studies (NASX)

### **NASX 105H - Introduction to Native American Studies. 3 Credits.**

Offered Autumn and Spring. Survey course to acquaint the student with Native American Studies by a general overview of Indian history, culture, philosophy, religious beliefs and contemporary issues.

Gen Ed Attributes: Historical Studies, Cultural Intl Diversity (X)

### **NASX 141 - Elementary Blackfoot I. 5 Credits.**

Offered autumn. An introduction to the Blackfoot language and culture. Students will learn how to write and read Blackfoot as well as how to conduct simple conversations.

### **NASX 142 - Elementary Blackfoot II. 4 Credits.**

Offered intermittently spring. Continuation of 141.

Gen Ed Attributes: Foreign Language Requirement

### **NASX 180 - Event Planning. 3 Credits.**

Offered spring semester. This course is intended for students to learn the skills necessary to put on a large event. The course is intended as a hands-on experiential learning course. The culmination of the course will be putting on the annual Kyi-Yo contest pow-wow, the first large regional pow-wow of the year on the circuit.

### **NASX 191 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NASX 192 - Independent Study. 1-6 Credits.**

(R-6) Prereq., consent of instr. Selected topics on American Indians under the direct supervision of a faculty member.

### **NASX 198 - Internship. 1-6 Credits.**

(R-9) Offered by special arrangement. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NASX 201X - Indian Culture Expressed Through Language. 3 Credits.**

Offered Autumn. This course has been designed to introduce students to a non-Western perspective of the relationship that exists between Indian cultures and their languages. Students will be exposed to various languages of American Indian peoples, and how through Native languages insight can be gained into history, traditions, and cultural life-ways of Indian peoples.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 210X - Native American Sports & Games. 3 Credits.**

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Offered Autumn or Spring. Explores Native American sports and games, both traditional and modern. Through classroom learning and actual play, students gain an understanding of how play and competition have been vital to Native communities.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 231X - Indigenous World View Perspectives. 3 Credits.**

Offered Spring. Same as ANTY 231X. Examination of Indigenous belief systems, with regard to world views, religious ceremonies, cultural ways and the impact that Anglo-European culture has had upon these systems. Focus on Indigenous peoples of Australia, New Zealand, Canada and the United States

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 235X - Oral and Written Traditions of Native Americans. 3 Credits.**

Offered Autumn and Spring. Prereq., WRIT 101 (or higher) or equivalent. Analysis of the oral traditions of Native Americans including an introduction to the literary works of early leading American Indian writers.

Gen Ed Attributes: Lit & Artistic Studies (L), Writing Course-Intermediate, Cultural Intl Diversity (X)

### **NASX 239L - Native North American History & Art. 3 Credits.**

Focus on Native North American history through art and material culture and its relationship to American Indian tribally specific aesthetics, cosmologies, worldviews and life-ways, historic uses and the contemporary Indian artistic experience.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **NASX 260X - Indigenous Community Development. 3 Credits.**

Offered intermittently. This course introduces the student to concepts in indigenous/rural sustainable community development in the countries of North America in broad historical and cultural frameworks.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 280 - NA Studies Research Theories and Methods. 3 Credits.**

Offered Autumn. Prereq., WRIT 101 (or higher) or equivalent, NAS major or minor. Introduction to the Research materials pertaining to the study of American Indian peoples and cultures. Emphasis on current research trends and writing.

Gen Ed Attributes: Writing Course-Intermediate

### **NASX 291 - Special Topics. 1-6 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NASX 292 - Independent Study. 1-6 Credits.**

(R 6) Experimental offerings of visiting professors, experimental offerings of new courses or one time offerings of current topics.

### **NASX 303E - Ecological Perspectives in Native American Traditions. 3 Credits.**

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An examination of Native American environmental ethics and tribal and historical and contemporary use of physical environmental resources.

Gen Ed Attributes: Ethical & Human Values Course

### **NASX 304E - Native American Beliefs and Philosophy. 3 Credits.**

Offered Autumn and Spring. A study of selected ethical systems; origins, world views; religious beliefs and the way they have been affected by western civilization.

Gen Ed Attributes: Ethical & Human Values Course, Cultural Intl Diversity (X)

### **NASX 306X - Contemporary Global Issues of Indigenous People. 3 Credits.**

Offered Autumn. An examination of the major issues that affect the contemporary experiences of Indigenous Peoples of the Americas, and other global communities. Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 340X - Native American Literature. 3 Credits.**

Offered Autumn. Selected readings from Native American Literature and criticism with emphasis on the literatures after the Native American literary Renaissance. A minimum of three genres covered and three culture areas.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 351 - Traditional Ecological Knowledge. 3 Credits.**

Offered summer. This course is one unit of the four unit (12 credit) summer semester program: Wild Rockies Summer Semester. Description: This course will explore the traditional ecological perspectives of the Salish, Kootenai, Blackfeet and Tlingit people, as well as how these perspectives relate to Western concepts of ecology. Through field-based activities, lectures by tribal elders, and personal exploration, students will come to a heightened understanding of the still vital cultural perspectives and practices of modern American Indians, particularly in the Rockies of Montana and Canada.

### **NASX 352 - Montana's Indians and Land. 3 Credits.**

Offered autumn. This course is one unit of the four unit (12 credit) fall semester program: Montana Afoot & Afloat: Human/Land Relations. This course gives students a greater understanding of Indian people's traditional relationships with the land in Montana, and an understanding of how and why those relationships may have changed. Extensive time will be spent on the Fort Belknap, Northern Cheyenne and Crow Reservations where the class will meet with tribal elders and learning will have an emphasis on environmental and tribal/land relationships.

### **NASX 354X - Indians of Montana since the Reservation Era. 3 Credits.**

Offered Autumn. Same as HSTA 354. Examination of the history of Montana Indians since the establishment of the reservations, contemporary conditions, and issues among both reservation and non-reservation Indian communities in the state. Special attention given to social and economic conditions, treaty rights, tribal sovereignty, and legal issues.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **NASX 360 - Native Americans and Cinema. 3 Credits.**

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Same as ENFM 344. Surveys the image of Native Americans in American film with an emphasis on "revisionist," or "breakthrough" films. Ultimate focus will be on films featuring Native American writers, directors and actors.

### **NASX 391 - Special Topics. 1-6 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NASX 392 - Independent Study. 1-12 Credits.**

### **NASX 394 - Workshop/Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Variable topics addressing Indian law, policy and culture by visiting scholars.

### **NASX 398 - Internship. 1-6 Credits.**

(R-6) Offered by special arrangement. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NASX 403 - Contemporary Tribal Resource Issues. 3 Credits.**

Offered intermittently. Acquaints students with contemporary tribal resource management and environmental policies.

### **NASX 405 - Gender Issues in Native American Studies. 3 Credits.**

Offered intermittently. Same as WS 342H. Focus on American Indian gender relations and their cultural continuity and historical evolution. National in scope with concentration on certain tribes. Group analysis of contemporary gender issues relevant to Native American peoples.

### **NASX 430 - American Indian Education. 3 Credits.**

Offered intermittently. An overview of American Indian education including a look at the unique needs of Indian children.

### **NASX 464 - History of American Indian Affairs to 1776. 3 Credits.**

Offered Autumn. Same as HIST 464. A study of American Indian relations with Europeans and the United States from first contact to 1776.

### **NASX 465 - History of American Indian Affairs in the 19th Century. 3 Credits.**

Offered Spring. Same as HIST 465. A study of tribal encounters and adjustments to the American nations in the nineteenth century.

### **NASX 466 - History of Indian Affairs from 1890. 3 Credits.**

A study of tribal encounters and adjustments to the American nation from 1890.

### **NASX 475 - Tribal Sovereignty. 3 Credits.**

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Offered Spring. An examination of the evolution of tribal governments from a historical and political perspective. Particular attention is devoted to the issues of tribal sovereignty and tribal-state conflicts.

### **NASX 479 - Tribal Government & Policymaking. 3 Credits.**

(R-6) Offered spring. Prereq., NASX 475. This course examines the evolution of tribal governing structures with a focus on contemporary formal tribal policy making processes, practices, and outcomes. The class concludes with an exploration of the limitations and challenges, as well as the benefits and opportunities, presented to tribal leaders and community members by these modern-day forms of tribal government. Course co-convenes with NASX 579. Level: Undergraduate

### **NASX 488 - Studies in Native American Autobiography. 3 Credits.**

Offered intermittently. Same as LIT 429. Prereq., LIT 300 or LIT 305/NASX 340, or consent of instr. Study of texts that present a first-person story of Native American individual's life within historical and cultural contexts, with discussion of theories of autobiography.

### **NASX 491 - Special Topics. 1-6 Credits.**

(R-6) Prereq., upper-division standing and consent of instr. Selected topics on American Indians under the direct supervision of a faculty member.

### **NASX 492 - Independent Study. 1-6 Credits.**

(R-9) Offered by special arrangement. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

### **NASX 494 - Seminar/Workshop. 3 Credits.**

(R-6) Offered Spring. Prereq., WRIT 101 or equivalent, one intermediate writing course, NAS major or minor, 18 credits in NAS, and junior standing or higher. Senior reading capstone course for the review of past and current literature on and by American Indians.

Gen Ed Attributes: Writing Course-Advanced

### **NASX 499 - Senior Capstone/Thesis. 3-9 Credits.**

(R-9) Offered by special arrangement. Prereq., NAS major or minor, 18 credits in NAS, junior standing, and consent of instr. Independent research project in Native American Studies, supervised by a faculty member, and leading to completion of baccalaureate degree.

### **NASX 521 - Indigenous Education. 3-6 Credits.**

The seminar will provide an opportunity for students from multiple sites to engage in the comparative study of issues associated with the education of Indigenous peoples and communities on an international scale with an emphasis on the role of language and culture through a review of educational practices and theories that have emerged from a variety of sources. Students may take the course once or a second year in sequence; some site instructors may change. The course is teleconferenced among University of Montana and the Universities of Hawaii Hilo, Alaska Fairbanks and Anchorage, Arizona, British Columbia, Dene (Navajo) College, and Te Whare Wananga o Awanuiarangi-Whakatane (New Zealand). No prerequisites apply; letter grades given, based on collaborative local and international projects, short response papers, and a term paper. Students be confident in using the internet. Level: Graduate

**NASX 579 - Tribal Governance and Policymaking. 3 Credits.**

(R-6) Offered Spring. This course examines the evolution of tribal governing structures with a focus on contemporary formal tribal policy making processes, practices, and outcomes. The class concludes with an exploration of the limitations and challenges, as well as the benefits and opportunities, presented to tribal leaders and community members by these modern-day forms of tribal government. Course co-convenes with NASX 479. Level: Graduate

**NASX 580 - NAS Research Methods. 3 Credits.**

Offered autumn. An exploration of research materials pertaining to the study of American Indian peoples and cultures, with an emphasis on current research trends and writing. Level: Graduate

**NASX 594 - Seminar Native American Studies. 1-3 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

**NASX 595 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

**NASX 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., graduate standing and consent of instr. Study of selected topics or problems on American Indians under the direct supervision of a faculty member. Level: Graduate

**NASX 598 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

## Natural Resource Science and Management (NRSM)

### **NRSM 110 - First Year Seminar in Environmental Science and Sustainability. 1.000 Credit.**

Offered autumn. This First Year Seminar introduces students to key issues in environmental science and sustainability, with a focus on how science can be applied to problem-solving. Students will also learn about key resources at the university and focus on the skills needed to ensure their success at UM.

### **NRSM 115 - First Year Seminar in Field Studies in Conservation. 1.000 Credit.**

Offered autumn. Prerequisites: Freshman or sophomore standing. Field study focusing on flora and fauna, history of land use and ecological change, contemporary forest management, conservation and community development in western Montana.

### **NRSM 121S - Environmental Science and Sustainability. 3.000 Credits.**

Offered autumn. An exploration of the major environmental science and sustainability issues facing humankind and the social processes required to manage environmental conflicts. Provides an introduction to the function of ecological systems and the impacts of human uses on the environment and explores strategies for addressing global climate change, ex-urban population growth, and environmental degradation.

Gen Ed Attributes: Social Sciences Course (S)

### **NRSM 170 - International Environmental Change. 3 Credits.**

Offered spring. An introduction to natural and anthropogenic environmental change from ancient to contemporary times. Exploration of the historical role and importance of ecological disturbance on the development and maintenance of terrestrial ecosystems around the world. Introduction to fields of study available in the College of Forestry and Conservation.

### **NRSM 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **NRSM 192 - Independent Study. 1-3 Credits.**

### **NRSM 200 - Natural Resource Professional Writing. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 (or higher) or equivalent. Students synthesize scientific literature and, using appropriate evidence and APA style, write natural-resources-based documents appropriate for distribution to scientists, managers, and the public.

Gen Ed Attributes: Writing Course-Intermediate

### **NRSM 210N - Soils, Water and Climate. 3.000 Credits.**

Offered spring. Prereq., M 115 or M 121 or M 122 or M 151 or M 162 or M 171 or M 172. The factors affecting earths terrestrial ecosystems are rapidly changing, and understanding their impact on ecosystem services to humanity is becoming increasingly important and yet complex. In this course, students will explore how climate, water and soils interact to shape earths biosphere. We will introduce students to a number of fundamental concepts in climate, hydrology, and soil science to gain a comprehensive view of the factors

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that shape and affect all terrestrial ecosystems. Through a series of lectures and field-based laboratories, students will be introduced to the fundamental principles of climate and hydrology that influence soil development, how they vary across small spatial scales, and how these physical, chemical, and biological processes interact to affect soil development. Ultimately, this class will introduce students to intimate relationship between climate, water, and soils, and how they interact to affect patterns of vegetation we see across the biosphere. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **NRSM 215 - Field Studies in Conservation. 1 Credit.**

(R-3) Offered intermittently. Field study focusing on flora and fauna, history of land use and ecological change, contemporary forest management, conservation and community development in western Montana.

### **NRSM 265 - Elements of Ecological Restoration. 3 Credits.**

Offered autumn. Prereq., one course in the ecological or biological sciences: BIOO 105N, BIOB 160N, BIOB 170N, BIOB 172, BIOE 370, BIOE 428, BIOE 447 or BIOE 448; or FORS 330; or NRSM 271N or NRSM 462 or consent of instructor. Overview of the natural and social science elements of ecological restoration, including the ecological foundations of restoration, practices used to restore terrestrial and aquatic habitats, philosophical and ethical challenges involved, and current initiatives in Montana and the United States. Includes Saturday field trips.

### **NRSM 271N - Conservation Ecology. 3 Credits.**

Offered autumn. Prereq., open to students enrolled in the Wilderness & Civilization program for the Wilderness Studies minor. An overview of ecological concepts and how ecology is applied to further our understanding of ecosystems and conservation. Topics include: ecosystems functions and values, biomes, natural selection and speciation, biodiversity, succession, climate change, fragmentation, protected areas, impacts of exotic species and other human influences on ecosystem functions.

Gen Ed Attributes: Natural Science Course (N)

### **NRSM 273 - Wilderness and Civilization Field Studies. 1-3 Credits.**

(R-4) Offered autumn 3 cr and spring 1cr. Prereq., open to students enrolled in the Wilderness & Civilization program for the Wilderness Studies minor or consent of instructor. Field studies in ecology and conservation. Includes natural history, field journaling, ecological monitoring, protected area management, and community conservation. One-day trips as well as extended backcountry trips.

### **NRSM 281 - Science of Climate Change. 3 Credits.**

This course provides an introduction to Earth's climate system and the scientific evidence of climate change. This course explores how past climate has shaped Earth's ecosystem and how humans are currently altering Earth's climate system, as well as potential future climate scenarios. Through this course students will gain a better understanding of Earth's energy budget, the global carbon cycle, and potential impacts of climate change. This class is open to all undergraduates, both science and non-science majors, and counts toward the Climate Change Studies minor.

### **NRSM 291 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors; new courses or one time offerings of current topics.



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### **NRSM 298 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NRSM 311 - Field Studies in Ecosystems and Human Communities. 2-3 Credits.**

(R-12) Offered every term. Prereq., consent of instr. Via extended backcountry travel, experiential examination of the structure and function of the ecosystems occurring within the course area. Also investigates the relationship of those ecosystems with the people that manage, live, and work in the area. Offered by the Wild Rockies Field Institute.

### **NRSM 321 - Field Studies and Energy Systems in Montana. 2-3 Credits.**

Offered Summer. Via an extended bicycle tour of Montana, students examine a variety of energy developments and their environmental, social, and economic implications.

### **NRSM 326 - Climate and Society. 3 Credits.**

Offered spring. Co-convened with NRSM 526. This course examines the social and political aspects of climate change, with a focus on international and domestic processes and cases. Cannot get credit for both NRSM 326, 426, and NRSM 526.

### **NRSM 344 - Ecosystem Science and Restoration Capstone. 5 Credits.**

Offered spring. Prereq., junior or senior standing in Ecological Restoration and successful completion of NRSM 265 and one advanced ecology course: BIOE 370, BIOE 428, BIOE 447, BIOE 448, FORS 330, NRSM 462, or WILD 485. This five-credit, service-learning course is the planning course for the capstone experience for students in the Ecosystem Science and Restoration major (although it is also open to students pursuing other majors). It is designed to get students active in research in ecosystem science and restoration ecology or in the application of ecological principles to restoration practice. The course includes lectures, labs, and hands-on experience working with ecologists and restoration practitioners from local government agencies, NGOs, or other organizations.

### **NRSM 345 - Watershed Dynamics. 3 Credits.**

Coreq. ENST 291, 391 392, NRSM 346. Offered each autumn by Northwest Connections. Via hands on application in rural Montana, students investigate watershed function; introductory stream hydrology and morphology; and fish, amphibian and aquatic furbearer habitat characteristics. The course also explores impacts of road building, timber harvest, and watershed fragmentation on watershed and stream function, fish habitat, and fish populations.

### **NRSM 346 - Forest and Communities. 3 Credits.**

Coreq., ENST 291, 391, 392, NRSM 345. Offered each autumn by Northwest Connections. Via backcountry travel and hands on field application in rural Montana, students will be immersed in the ecology of forested ecosystems in Northwest Montana, including plant succession, fire ecology, soil science and wildlife ecology.

### **NRSM 349E - Climate Change Ethics/Policy. 3 Credits.**

## University Of Montana

Offered autumn. This course focuses on the ethical dimensions of climate change policy. It will cover the following major topics: (1) climate change, personal and collective responsibilities, (2) ethics, climate change and scientific uncertainty, (3) distributive justice and international climate change negotiations, (4) intergenerational justice and climate change policy.

Gen Ed Attributes: Ethical & Human Values Course

### **NRSM 352 - Mountain Environment and Development. 3 Credits.**

Offered summer only. Coreq., PTRM 353. This course covers the contentious issues surrounding environment and development in the Himalaya using the Garhwal region of India as the example.

### **NRSM 360 - Rangeland Management (equiv 260). 3.000 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. An introduction to rangelands and their management, grazing influences, class of animal, grazing capacity, control of livestock distribution, improvements, competition and interrelationships with wildlife. Laboratory exercises to gain on-site experience on topics and concepts presented in lectures.

### **NRSM 370S - Wildland Conservation Policy/Governance. 3 Credits.**

Offered autumn. Prereq., open to students enrolled in the Wilderness & Civilization program for the Wilderness Studies minor. Examination of the historical, philosophical, and legislative background for development and management of our national system of wilderness areas, wild and scenic rivers, trails, and national parks; their place in our social structure.

Gen Ed Attributes: Social Sciences Course (S)

### **NRSM 371 - Wilderness Issues Lecture Series. 1 Credit.**

(R-3) Offered spring. Explores current issues in wilderness preservation, management and research.

### **NRSM 373 - Wilderness and Civilization. 3 Credits.**

(R-6) Offered autumn. Prereq., open to students enrolled in the Wilderness & Civilization program for the Wilderness Studies minor. Social, cultural and scientific perspectives on the wilderness idea and wildland conservation. Course topics include history of wilderness and the wilderness movement, various philosophical viewpoints on wilderness, natural resource and protected area management, global change issues, and how wilderness fits into larger landscapes and societies.

### **NRSM 374 - Yellowstone Studies. 1 Credit.**

Offered spring. Ecological and sociopolitical perspectives on the greater Yellowstone ecosystem. Topics include winter ecology, biodiversity conservation, national park planning and management, winter recreation, fire, and wildlife. Field course in the Yellowstone area. Part of the Wilderness and Civilization Program.

### **NRSM 379 - Collaborations in Natural Resource Decisions. 3 Credits.**

Offered spring. Political and social processes affecting natural resource decisions. Examination of cases of multi-party collaboration in forestry, range, and watershed management issues.

### **NRSM 385 - Watershed Hydrology. 3 Credits.**

## University Of Montana

Offered autumn and spring. Prereq., M 115 or M 121 or M 122 or M 151 or M 162 or M 171 or M 172. An introduction to physical and biological controls over water movement and storage in the environment, and how those controls are affected by land management practices.

### **NRSM 386 - Watershed Hydrology Lab. 1 Credit.**

Offered autumn and spring. Coreq., NRSM 385 or consent of instr. An introduction to basic watershed measurement and analysis techniques. Lab exercises designed around the use of spreadsheets and computer graphics.

### **NRSM 389E - Ethics and Sustainability. 3.000 Credits.**

Offered autumn. Prereq., sophomore, junior, or senior standing. Investigation of ethical questions arising from 21st Century challenges of building just and sustainable societies, with a focus on issues related to natural resources, biodiversity, ecological restoration, environmental policy, and climate change.

Gen Ed Attributes: Ethical & Human Values Course

### **NRSM 391 - Special Topics. 12.000 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors; new courses or one time offerings of current topics.

### **NRSM 392 - Independent Study. 1-3 Credits.**

### **NRSM 395 - Community-Based Approaches to Wildlife Conservation. 1-6 Credits.**

Offered each summer by Northwest Connections. Via field-based study in western Montana, students learn emerging strategies for reducing human-wildlife conflicts while considering ecological, economical, and societal impacts. Coreq., ENST 395 Wildlife Policy & Rural Communities and Field Ecology of Threatened & Endangered Species in the Northern Rockies. The course emphasizes the multiple perspectives of stakeholders and the importance of striving for collaborative solutions to conflicts over wildlife management and controversial species.

### **NRSM 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NRSM 404 - Wilderness in American Context. 4 Credits.**

An expansive treatment of the history of the wilderness preservation movement in the United States. Introduction to the successive influences of philosophy, science, art and politics on society's relationship with wilderness. Discussion of the Wilderness Act of 1964. Level: Undergraduate

### **NRSM 405 - Management of Wilderness Resource. 4 Credits.**

An ecology-based treatment of wilderness management. Brief overview of fundamental ecological principles followed by an examination of their specific and often unique applications to wilderness ecosystems. Presentation of basic wilderness management principles and guidelines. Discussion of nonconforming wilderness uses. Level: Undergraduate

**NRSM 406 - Wilderness Management Planning. 3 Credits.**

Exploration of basic planning theory, concepts, effective plan writing, and the characteristics of successful planning and implementation. In-depth treatment of the Limits of Acceptable Change planning framework. Comparison and evaluation of the different planning approaches used by the four wilderness managing agencies. Level: Undergraduate

**NRSM 408 - Global Cycles and Climate. 3 Credits.**

Offered spring even-numbered years. An analysis of the earth's major global biogeochemical cycles with a focus on the ways and extent to which each of them influences and interacts with the global climate system. Level: Undergraduate-Graduate

**NRSM 415 - Environmental Soil Science. 3 Credits.**

Offered spring odd-numbered years Prereq., ENSC 245N or NRSM 210N or consent of instr. A detailed analysis of the physical, chemical and biological properties of soils and how they function, with a focus on soil processes and how they affect, and are affected by human activities. Specific topics include element cycling, water quality, the effects of environmental change soil biogeochemistry, plant-soil interactions, and the consequences of large-scale disturbances on soil processes. Level: Undergraduate-Graduate

**NRSM 418 - Ecosystem Climatology. 3 Credits.**

Interactions between the biosphere and atmosphere to advanced undergraduate students and graduate students. This course will explore the interactions between Earth's biosphere and atmosphere and how they affect climate over a range of scales. We will focus on the exchange of energy, mass, and important elements between the biosphere and atmosphere and how this exchange can lead to fascinating feedbacks in Earth's climate system. Basic physics and math is not required but it is recommended. Level: Undergraduate-Graduate

**NRSM 422 - Natural Resource Policy and Administration. 3 Credits.**

Offered autumn and spring. Policy formation in the United States and a survey of the major resource policies interpreted in their historical and political contexts. Level: Undergraduate-Graduate

**NRSM 424 - Community Forestry & Conservation. 3 Credits.**

Offered spring. Co-convened with NRSM 524. In-depth examination of the history, theory and management issues faced in community-driven forestry and conservation in the United States and abroad. Cannot get credit for both NRSM 424 and NRSM 524. Level: Undergraduate

**NRSM 427 - Water Policy. 3 Credits.**

Offered spring. Prereq., junior or senior status. This course explores the laws, policies, and judicial decisions that have shaped and continue to influence patterns of water allocation and access in the United States. The course offers a general introduction to U.S. water law, specifically highlighting regional and interstate differences in both surface and groundwater appropriation schemes. Important intersections between water policy and other major bodies of U.S. law and policy are investigated, including the U.S.-tribal trust responsibility, the Clean Water Act the Endangered Species Act, and federal hydropower relicensing processes. In addition, special attention is paid to unique aspects of Montana water law and policy as well as current issues of local and regional importance. Level: Undergraduate and Graduate

**NRSM 428 - Climate Policy. 3 Credits.**

## University Of Montana

Offered autumn, odd years. This course explores the evolving laws, policies, and judicial decisions that influence levels of carbon dioxide emissions and other climate altering activities occurring in the United States and globally. This course includes a thorough overview of global climate policy including the structure of the United Nations Framework Convention on Climate Change (UNFCCC) and policies resulting from the various Conference of Parties (COP) meetings, including the Paris Agreements. From this starting point, the course then explores similar issues at the nation state and sub-national scale, including an investigation of how various proactive emissions regulations and reactive mitigation and adaptation activities are treated in both statutory and administrative legal regimes. Level: Undergraduate-Graduate

### **NRSM 455 - Riparian Ecology & Management. 3 Credits.**

Offered intermittently. Prereqs., successful completion or concurrent enrollment in NRSM 385 and completion of one of the following introductory ecology courses: BIOE 172, BIOE 370, BIOE 428, BIOE 447, BIOE 448, FORS 330, or NRSM 462. Importance of riparian/wetland areas and the complexities associated with their management for short and long term benefits. Level: Undergraduate

### **NRSM 462 - Rangeland Ecology. 3 Credits.**

Offered spring. NRSM 210N; and B100 105N or BIOB 170N or BIOE 172N or BIOB 160N or FORS 240; and FORS 201 or STAT 216 or SOCI 202 or WILD 240 or PSYX 222. We will discuss the ecological principles and processes that drive the structure and function of rangeland ecosystems. We will focus on the intersections of plant, animal, ecosystem, and landscape ecology. We will weave in discussions of management to understand how rangeland dynamics contribute and respond to differing management paradigms. Level: Undergraduate-Graduate

### **NRSM 465 - Foundations of Restoration Ecology. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, one intermediate writing course, graduate or junior or senior standing and NRSM 265 and one 300-400 level ecology courses: BIOE 370, BIOE 428, BIOE 447, BIOE 448, FORS 330, or NRSM 462; or consent of instructor. This course covers the primary ecological theories that inform the practice of ecological restoration. Topics include the dynamic nature of ecological systems, community assembly, biodiversity and ecosystem functioning, food web dynamics, ecological engineering, macroecology, and statistical issues and study design. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **NRSM 475 - Environment & Development. 3 Credits.**

Offered spring. Co-convened with NRSM 575. Examines key social forces that influence how individuals, groups and nation-states understand and live within their bio-physical environments, especially policies and processes relating to development, corporate capitalism, globalization, culture, class and other forms of power and social relations. Pays close attention to ways both indigenous and introduced resource use and management practices (including conservation) variably impact people of different races, classes, genders, cultures and livelihood practices. Cannot get credit for both NRSM 475 and NRSM 575. Level: Undergraduate

### **NRSM 491 - Special Topics. 1-12 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors; new courses or one time offerings of current topics. Level: Undergraduate-Graduate

### **NRSM 492 - Independent Study. 1-3 Credits.**

## University Of Montana

(R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course. Level: Undergraduate-Graduate

### **NRSM 494 - Ecosystem Science and Restoration Seminar. 1 Credit.**

Offered spring. Prereq., senior standing and successful completion or concurrent enrollment in NRSM 495; and consent of instr. This seminar provides a forum for students to share the results of practicum projects conducted in NRSM 495. Each student will lead at least one seminar during the semester. Level: Undergraduate

### **NRSM 495 - Ecosystem Science and Restoration Practicum. 1-6 Credits.**

(R-6) Offered every semester. Prereq., senior standing in Ecosystem Science and Restoration and successful completion of NRSM 344, a faculty-approved practicum proposal; and consent of instructor. The goal of this service-learning practicum is for students to gain real-world experience in research, monitoring, or project implementation. Students will implement a project under the supervision of faculty and mentors from local management agencies, organizations or other sponsors. Level: Undergraduate

### **NRSM 498 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate-Graduate

### **NRSM 499 - Senior Thesis. 1-3 Credits.**

(R-3) Offered autumn and spring. Prereq., senior standing and consent of instr. Preparation of a major paper based on study or research in a field selected according to the needs and objectives of the student. Level: Undergraduate-Graduate

### **NRSM 500 - Conservation and Social Science Methods. 3 Credits.**

Offered autumn. Prereq., a course in statistics or consent of instr. The nature of scientific research, planning research projects, organization and presentation of research results. Level: Graduate

### **NRSM 513 - Natural Resource Conflict Resolution. 3 Credits.**

Offered autumn. Same as ENST 513 and LAW 613. Examines the basic framework for preventing and resolving natural resource and environmental conflicts in America. Reviews the history of alternative approaches, emphasizes the theory and practice of collaboration, and considers future trends. This highly interactive course uses lectures, guest speakers, case studies, and simulations. Level: Graduate

### **NRSM 515 - Collaborative Skills for Natural Resource Leaders. 3 Credits.**

Same as COMX 515, ENST 515 and LAW 519. This course prepares students to effectively engage in multiparty negotiation on natural resource and environmental issues. It is grounded in theory and provides an opportunity to develop practical skills in both negotiation and facilitation/mediation. Guest speakers, case studies, and simulations allow students to develop, test, and refine best practices. The course is face-paced, highly interactive, and serves as the second of three required courses in the Natural Resources Conflict Resolution Program. Level: Graduate

### **NRSM 524 - Community Forestry & Conservation. 3 Credits.**

## University Of Montana

Offered spring. Co-convened with NRSM 424. In-depth examination of agroforestry, community forestry, and opportunities and constraints to the use of trees in rural development and protected areas management. Level: Graduate

### **NRSM 526 - Climate and Society. 3 Credits.**

Offered spring. Co-convened with NRSM 426. This course applies relevant social and political theory to the problem of climate change and examines the social science of climate change. Cannot get credit for both NRSM 426 and NRSM 526. Level: Graduate

### **NRSM 532 - Forest Ecosystem Analysis. 3 Credits.**

Offered spring. Graduate standing only. Logical strategies for transforming ecosystem complexity into simplified simulation models with emphasis on space/time scaling and environmental policy relevance. Level: Graduate

### **NRSM 540 - The Food-Energy-Water Nexus. 3 Credits.**

Offered autumn. Same as GEO 540. Interdisciplinary course examining interactions between food, energy, and water systems and core concepts and tools at the food-energy-water nexus. Perspectives and connections across scales, sectors, and disciplines (including social and biophysical sciences and engineering) are emphasized. Level: Graduate

### **NRSM 541 - Food-Energy-Water Nexus Field Lab. 2 Credits.**

(R-4) Offered spring. Same as GEO 541. Field-based course connecting theory and practice by examining food-energy-water case studies, conducting interdisciplinary synthesis, and communicating with diverse stakeholders. Combines intermittent in-class meetings and a week-long field trip to regional sites to examine food-energy-water issues on-the-ground and to meet with and learn from producers, managers, policy-makers, and tribal members.

### **NRSM 542 - Food-Energy-Water Nexus Seminar. 1 Credit.**

(R-4) Offered autumn and spring. Same as GEO 542. Autumn seminars will focus on building interdisciplinary knowledge of the food-energy-water nexus through presentations from guest speakers, readings, and domestic and international case studies. Spring seminars will focus on building skills for multiple career paths through presentations and guest lectures.

### **NRSM 560 - American Wilderness Philosophy & Policy. 4 Credits.**

History of the American Wilderness idea and associated policies, including the Wilderness Act and implementing regulations. Current management challenges also covered. Level: Graduate

### **NRSM 561 - Management of Wilderness Ecosystems. 4 Credits.**

Ecosystem science and policies and management practices related to managing specific resources, such as air, wildlife, and water, within wilderness. Management of non-conforming uses is also covered. Level: Graduate

### **NRSM 563 - Wilderness Planning. 4 Credits.**

Planning theory and effective plan development, including principles and practices of public involvement. Includes examination of primary planning frameworks. Level: Graduate

## University Of Montana

### **NRSM 570 - Political Ecology. 3 Credits.**

Graduate seminar on key theories, issues and literature in the subfield of Political Ecology, an interdisciplinary environmental social science approach which integrates how political, economic, cultural and ecological processes interact and shape society nature relations. Case examples are drawn from both the North and South. Level: Graduate

### **NRSM 571 - International Conservation & Development. 3 Credits.**

Offered spring. Prereq., graduate standing. Critical review of selected international natural resource development, conservation and management approaches and experiences. Level: Graduate

### **NRSM 574 - Perspectives in Human Dimensions. 3 Credits.**

Consent of instructor. This course will provide graduate students with an understanding of multiple perspectives in human dimensions of natural resources. The course is intended to be broad in nature in order to provide students with a comprehensive understanding of the topics. Students will read and discuss foundational pieces by Orr and Leopold (among others) and explore newer readings on current research. The course will cover social psychological and sociological perspectives and discuss key issues such as scale, multidisciplinary research, sustainability and social diversity in natural resources. Students will be challenged to approach natural resources issues from multiple perspectives, not just the perspective they are most familiar with. Students will be able to communicate effectively among social scientists and be able to integrate diverse perspectives. Level: Graduate

### **NRSM 575 - Environment & Development. 3 Credits.**

Offered spring. Co-convened with NRSM 475. Examines key social forces that influence how individuals, groups and nation-states understand and live within their bio-physical environments, especially policies and processes relating to development, corporate capitalism, globalization, culture, class and other forms of power and social relations. Pays close attention to ways both indigenous and introduced resource use and management practices (including conservation) variably impact people of different races, classes, genders, cultures and livelihood practices. Level: Graduate

### **NRSM 579 - Collaborative Conservation. 3 Credits.**

(R-4) Offered every semester. Same as ENST 579 and LAW 679. Prereq., ENST 513, LAW 613, or NRSM 513 or consent of instructor. Designed as the capstone experience of the Natural Resources Conflict Resolution Program. Provides practical experience in multi-party collaboration and conflict resolution. Students may design their own project in consultation with the director of the NRCR Program, or participate in a project organized and convened by faculty. Projects may be conducted year-round. Level: Graduate

### **NRSM 584 - Sustainable Protected Area Management and Tourism. 3 Credits.**

This course will explore the intersection of social, cultural, environmental, and economic aspects of protected area management in relation to sustainability of resources, tourism, visitor management, conservation, and community development. Case study examples from diverse contexts, settings, and types of terrestrial and aquatic protected areas within the U.S. and around the world will illustrate the complexity of protected area management in a time of rapid change.

### **NRSM 594 - Seminar. 1-4 Credits.**



## University Of Montana

(R-12). Offered intermittently. Prereq. graduate standing. Presentations by student, faculty, and associates on issues and topics in their field. Level: Graduate

### **NRSM 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

### **NRSM 596 - Independent Study. 1-12 Credits.**

(R-12) Offered every term. Prereq., consent of instr. Individual study or research problems. Level: Graduate

### **NRSM 597 - Graduate Research. 1-15 Credits.**

(R-15) Offered every term. Independent graduate research in forest management, wood science, soils, wildlife management, silviculture, recreation and other topic areas. Level: Graduate

### **NRSM 598 - Internship. 1-2 Credits.**

(R-12) Offered every term. Practical application of academic learning in an off-campus placement. Prior approval must be obtained from faculty supervisor. Level: Graduate

### **NRSM 599 - Professional Paper. 1-15 Credits.**

(R-15) Offered every term. Professional paper preparation. Level: Graduate

### **NRSM 622 - Advanced Problems in Environmental Policy. 3 Credits.**

Offered spring even-numbered years. Examines environmental policy problems and contemporary issues in environmental policy, law, and administration. Policy tools, concepts and research resources introduced. Numerous problems, themes, and issues in environmental policy analyzed. Readings-based seminar; students lead most reviews and discussions. Level: Graduate

### **NRSM 695 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **NRSM 697 - Graduate Research. 1-15 Credits.**

(R-15) Offered every term. Independent graduate research in forest management, wood science, soils, wildlife management, silviculture, recreation and other topic areas. Level: Graduate

### **NRSM 699 - Thesis. 1-15 Credits.**

(R-15) Offered every term. Thesis/dissertation preparation. Level: Graduate

## Neuroscience (NEUR)

### **NEUR 110N - Introduction to Brain Diseases. 3 Credits.**

This course is designed to provide both non-science and science students with a basic understanding of brain diseases and injuries, such as spinal cord injury, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), epilepsy, depression, and addiction.

### **NEUR 280 - Fundamentals of Neuroscience. 3 Credits.**

Prereq., BIOB 160N and BIOB 161N. Course will focus on the molecular and cellular underpinnings of the functions of the brain and nervous system. The topics will range from the basis of electrical and chemical signaling to the organization of the sensory systems and mechanisms involved in learning, memory, and complex behaviors.

### **NEUR 281 - Fundamentals of Neuroscience II. 3 Credits.**

Prereq., NEUR 280. Explores the foundational understanding of the sensory systems, cognitive processing, perception, and memory. Specific topics include: the organization of sensory systems, the control of movement; mechanisms for learning, memory, and complex behaviors.

### **NEUR 292 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instructor. Independent study is designed to assist individual students in studying and understanding key topics in the neuroscience curriculum through individual mentoring, tutoring and/or self-directed learning.

### **NEUR 380 - Molecular Neuroscience. 3 Credits.**

Prereq., BIOB 260 and NEUR 280. The material covered will give students a practical knowledge of the subcellular organization and function of the nervous system. Students will learn how brain energy metabolism is a dynamic, and highly regulated process. We will explore the variety forms of neuronal chemical communication that may not conform to basic concepts of synaptic signaling. We will study processes that are involved in the growth and guidance of axons leading to the formation as well as the elimination of synapses. We will learn about the processes that are involved in the regulation of sexual differentiation of the nervous system. We will explore the basic mechanisms involved in learning and memory. Finally, Students will learn about the molecular and cellular mechanisms associated with neurodegenerative disease.

### **NEUR 390 - Undergraduate Research. 1-10 Credits.**

(R-10) Independent research under the direction of a faculty member.

### **NEUR 391 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NEUR 392 - Independent Study. 1-6 Credits.**

## University Of Montana

(R-6) Offered intermittently. Prereq., consent of instructor. Independent study is designed to assist individual students in studying and understanding key topics in the neuroscience curriculum through individual mentoring, tutoring and/or self-directed learning.

### **NEUR 441 - CNS Diseases. 3 Credits.**

Offered autumn. Prereq., NEUR 280, BIOB 260, and BIOB 272. This course is designed as a special topics course within the new neuroscience major that focuses on developing an understanding of common diseases affecting the Central Nervous System (CNS), such as stroke, traumatic brain injury, Alzheimer disease, Parkinson's disease, schizophrenia, amyotrophic lateral sclerosis, epilepsy, etc.) For each of the CNS disorders surveyed (which will vary from year to year), an emphasis will be placed on framing the symptoms and etiology of the disease within the context of the normal neuronal function at the anatomical, cellular and molecular levels. Where feasible, lectures will be supplemented with presentations by clinicians with expertise in the field. Students will also develop an appreciation for the linkages between basic and translational research in neurological diseases as well as the importance of disease models in the development of new therapies. Level: Undergraduate

### **NEUR 458 - Neuroscience Research. 4 Credits.**

Offered autumn. Prereq., senior standing in Neuroscience or consent of instructor. Theory and practical experience in neuroscience experiment design, data collection, results analysis and report creation. Students will generally assist with ongoing research as well as attend formal classroom presentations and discussions. Students will be required to work with the course writing instructor to undertake the writing process and develop a primary literature review, an abstract and final report based on the experiments conducted and the data collected. Students with well-developed research ideas and skills may be allowed to undertake supplemental independent research. Level: Undergraduate

### **NEUR 490 - Undergraduate Research. 1-10 Credits**

(R-10) Offered autumn. Prereq., senior standing in Neuroscience or consent of instructor. Theory and practical experience in neuroscience experiment design, data collection, results analysis and report creation. Students will generally assist with ongoing research as well as attend formal classroom presentations and discussions. Students will be required to work with the course writing instructor to undertake the writing process and develop a primary literature review, an abstract and final report based on the experiments conducted and the data collected. Students with well-developed research ideas and skills may be allowed to undertake supplemental independent research.

### **NEUR 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NEUR 582 - Research Seminar in Neuroscience. 1 Credit.**

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in neuroscience. Level: Graduate

### **NEUR 590 - Graduate Research. 1-10 Credits.**

(R-10) Independent research under the direction of a faculty member. Graded credit/no credit. Level: Graduate

## University Of Montana

### **NEUR 594 - Seminar. 1 Credit.**

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in neuroscience. Level: Graduate

### **NEUR 610 - Neuropharmacology. 3 Credits.**

Offered alternate years. Prereq., BMED 613 or NEUR 661 or consent of instr. Focus on current areas of research and research technologies in neuropharmacology. Development of presentations and research grant proposals. Level: Graduate

### **NEUR 646 - Neuropharmacology. 3 Credits.**

Offered alternate years. Prereq., BMED 641 or NEUR 661. Mechanisms of major neurotoxins and neurological disease. Level: Graduate

### **NEUR 661 - Neuroscience I. 4 Credits.**

Offered autumn. Prereq., BIOC 380 or equiv. Overview of the structure and function of the nervous system. Level: Graduate

### **NEUR 662 - Neuroscience II. 4 Credits.**

Offered spring. Prereq., NEUR 661. Fundamentals of developmental neuroscience, behavioral and cognitive neuroscience and computational neuroscience. Level: Graduate

### **NEUR 667 - Topics in Neurobiology. 1-3 Credits.**

(R-9) Offered every year. Prereq., NEUR 661. Current topics in neuroscience. Level: Graduate

### **NEUR 690 - Graduate Research. 1-10 Credits.**

(R-10) Independent research under the direction of a faculty member. Graded credit/no credit. Level: Graduate

## Non-Profit Administration (NPAD)

### **NPAD 166 - Introduction to Public Service. 3 Credits.**

Offered every autumn and spring (rotates online and in person). This course acquaints students with the structure, issues and "themes" of public service and stimulates our thinking about how leaders respond (or fail to respond) to public needs.

### **NPAD 191 - Special Topics. 1-6 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NPAD 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **NPAD 267 - Leadership and Nonprofits. 3 Credits.**

Offered online and in person, every semester.

### **NPAD 392 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **NPAD 398 - Internship. 3-6 Credits.**

Offered autumn and spring. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NPAD 466 - Practical Applications in Nonprofit Administration. 3 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. Introduction nonprofit management and public service and the complexity of the role of nonprofit organizations in society.

### **NPAD 467 - Advanced Nonprofit Administration. 3 Credits.**

Offered spring. Prereq., PSCI 466 or NPAD 466 and junior standing or consent of instr. In-depth exploration of special advanced issues related to nonprofit management, including fundraising, budgeting, and program planning.

### **NPAD 492 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **NPAD 498 - Internship. 3-6 Credits.**

## University Of Montana

Offered autumn and spring. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **NPAD 501 - Nonprofit Human Resource Management. 2 Credits.**

On-line course offered every year. Addresses human resource needs specific to nonprofits, including payroll, employment law, and other legal issues. Level: Graduate

### **NPAD 502 - Nonprofit Volunteer Management. 2 Credits.**

On-line course offered every year. Addresses the process of recruiting and retaining volunteers at a nonprofit organization, including case studies and hands-on projects. Level: Graduate

### **NPAD 503 - Nonprofit Program Planning & Evaluation. 2 Credits.**

On-line course offered every year. Explores program planning for nonprofits from top-to-bottom, including needs assessment and evaluation. Level: Graduate

### **NPAD 505 - Nonprofit Advocacy. 2 Credits.**

On-line course offered every year. Explores and reviews the role of nonprofit organizations in advocacy. Level: Graduate

### **NPAD 506 - Nonprofit Board Management. 2 Credits.**

Online course offered every year. Explores policymaking and fundraising roles and responsibilities of the board; strategies for board recruitment, orientation, and evaluation; and executive director/board relationships. Level: Graduate

### **NPAD 510 - Nonprofit Strategic Planning. 2 Credits.**

Online course offered every year. This course explores the importance of visionary leadership and strategic planning to the success of nonprofit agencies. Level: Graduate

### **NPAD 511 - Nonprofit Grant Writing. 2 Credits.**

Online course offered every year. Students learn how to write the essential parts of a grant proposal and how to search for appropriate funding sources. Level: Graduate

### **NPAD 512 - Nonprofit Fundraising. 2 Credits.**

Online course offered every year. The course covers all major aspects of a fundraising plan including: annual fund, major gifts, capital campaigns, planned giving, grants and special events. The course will also give students the foundation and tools needed to implement these plans into action. Level: Graduate

### **NPAD 513 - Nonprofit Financial Management. 2 Credits.**

Online course offered every year. This course explores special issues related to nonprofit financials including accounting basics, budgeting, financial statement ratios, management controls and nonprofit income tax reporting processes. Level: Graduate

## Nursing (NRSG) < University of Montana

### Nursing (NRSG)

#### **NRSG 191 - Special Topics. 1-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### **NRSG 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

#### **NRSG 230 - Nursing Pharmacology. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program. This course provides the student with an overview of pharmacology with an emphasis of the study of effects, interactions, and nursing considerations of pharmacologic agents on the client population across the lifespan. The course also explores the ethical, legal, cultural and age implications of pharmacologic therapy across diverse populations and the lifespan.

#### **NRSG 231 - Nursing Pharmacology Lab. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program. An integration of lab experiences focusing on the basic principles in providing safe medication administration, including intravenous therapy across diverse populations and the lifespan.

#### **NRSG 232 - Foundations of Nursing. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program. This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students learn concepts and skills necessary for maintaining standard precautions, physical, psychological and nutritional safety, along with skills needed in therapeutic interventions. Students are introduced to the concepts of professional nursing, patient needs, safety, communication, teaching/learning, critical thinking, ethical-legal, rural nursing, cultural and ethnic diversity, and interdisciplinary patient-centered care.

#### **NRSG 233 - Foundations of Nursing Lab. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program. An integration of lab experiences focusing on psychomotor nursing skills needed to assist individuals in meeting basic human needs. Application of the nursing process and hands-on learning experiences for nursing skills, patient assessments, nutritional safety, and basic therapeutic skills are practiced and demonstrated.

#### **NRSG 234 - Adult Nursing I. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester 1 of the RN program. This course builds upon the knowledge and skills acquired in Foundations of Nursing, and places them in the context of patient-centered care.

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Social, cultural, ethical, rural and legal issues, end-of-life and palliative care across diverse adult populations are introduced. Health promotion and prevention throughout the adult lifespan, with specific focus on the geriatric patient, is emphasized. Normal aging, health alterations associated with aging, and their implications are addressed.

### **NRS 235 - Adult Nursing I Clinical. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester 1 of the RN program. This clinical introduces the student to nursing practice in care of the stable adult patient. This includes care of the adult in a variety of health care settings. Students utilize the nursing process to develop individualized plans of care to prevent illness, promote wellness and maintain or restore health based on patient needs and evidence based practice.

### **NRS 236 - Health and Illness of Maternal Nursing. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester 1 of the RN program. In this course, the student applies holistic concepts to the professional nursing care of the childbearing family including conception, prenatal, intrapartum, postpartum and newborn care. Content addresses health and complex alterations, reproduction and menopause, nutrition, therapeutic communication, ethical, legal, cultural and evidenced-based practice.

### **NRS 237 - Health and Illness of Maternal Nursing Clinical. 1 Credit.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester 1 of the RN program. This clinical introduces the student to the role of the registered nurse in the care of the childbearing family. Students will utilize the nursing process to assess and develop individualized plans of care for mother and infant. Emphasis will be placed on patient education to promote healthy mother infant and childbearing family bonding.

### **NRS 244 - Adult Nursing II. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. This course builds upon previous knowledge of the nursing process and care of the patient experiencing acute and chronic disease alterations. Pathophysiologic processes are discussed as related to evidence-based nursing interventions. Students apply the nursing process, nutritional therapy, and pharmacological therapy utilizing interdisciplinary practice to promote, maintain, and restore health across the adult lifespan.

### **NRS 245 - Adult Nursing II Clinical. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. In this clinical experience the student will provide care for individuals and families experiencing acute health alterations, and those associated with chronic disease processes. Students use the nursing process to systematically analyze information to plan and implement nursing interventions which are individualized and founded on evidence-based practice.

### **NRS 246 - Health and Illness of Child and Family Nursing. 2 Credits.**



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Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. In this course, the student applies holistic concepts to the professional nursing care of children and their families in health, illness, end-of-life and palliative care. Emphasis is placed on incorporating growth and developmental principles to facilitate positive health outcomes through health promotion, nutrition and disease prevention.

### **NRS 247 - Health and Illness of Child and Family Nursing Clinical. 1 Credit.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. In this clinical, students will utilize the nursing process, to provide nursing care of healthy and high-risk pediatric populations and their families experiencing disruptions in bio/psycho/social/cultural and spiritual needs. Emphasis is also placed on health promotion, health maintenance, and therapeutic communication.

### **NRS 254 - Mental Health Concepts. 2-3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. In this course, the student focuses on the nursing concepts utilizing basic human needs, developmental theory, nursing process, therapeutic communication, and nursing interventions to promote and maintain health for clients and families experiencing mental-health issues. The student will examine client responses to stressors across the life span. Tasks of biological-behavioral concepts in psychosocial nursing care, rural and cultural impacts will be addressed.

### **NRS 255 - Mental Health Concepts Clinical. 1 Credit.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I and II of the RN program. This clinical applies the knowledge of psychiatric and mental health nursing. Students will have mental health focused clinical experiences in a variety of settings.

### **NRS 256 - Pathophysiology. 3 Credits.**

Offered spring and autumn. Offered at Missoula College. Prereq., successful acceptance into the Registered Nursing program. This course introduces the student to the basic principles and processes of pathophysiology including cellular communication, genes and genetic disease, forms of cellular injury, nutrition, fluid and electrolyte/acid base balance, immunity, stress coping and illness, and tumor biology. Pathophysiology of the most common alterations according to body systems will be discussed as well as the latest developments in research and patient-centered nursing interventions.

### **NRS 259 - Adult Nursing III. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I, II and III of the RN program. This course expands on the nursing role in care of patients with complex health alterations. Students utilize evidence-based, interdisciplinary interventions to meet patient and family needs.

### **NRS 260 - Adult Nursing III Lab. 1 Credit.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I, II and III of the RN program. In this lab students are introduced to basic electrocardiogram interpretation, advanced concepts of perfusion, ventilation and

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complex pharmacologic regimens.

### **NRS 261 - Adult Nursing III Clinical. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I, II and III of the RN program. This clinical experience focuses on application of the nursing process and utilization of information to provide comprehensive nursing care to the acutely ill patient experiencing complex health alterations in a variety of settings. Emphasis is placed on prioritization of care and collaboration with other members of the interdisciplinary team to ensure optimal client care.

### **NRS 266 - Managing Client Care for the Registered Nurse. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I, II and III of the RN program. In this course students examine concepts of leadership and management emphasizing prioritization, delegation, and supervision of nursing care for patients across the lifespan. Topics also include communication techniques, legal and ethical issues, care of the culturally diverse patient, and utilizing change theory. Healthcare policy, finance, and regulatory environment issues are explored and applied to planning, collaborating and coordinating care across the continuum.

### **NRS 267 - Managing Client Care for the Registered Nurse Clinical. 2 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., acceptance into the Registered Nursing Program and successful completion of semester I, II and III of the RN program. This precepted clinical experience focuses on principles of nursing leadership and management in a variety of settings. Students apply knowledge to provide culturally competent, holistic interventions within the professional nursing role for individuals, communities, and families across the lifespan.

### **NRS 291 - Special Topics. 1-6 Credits.**

Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NRS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## Nutrition (NUTR)

### **NUTR 221N - Basic Human Nutrition. 3 Credits.**

The principles of science as applied to current concepts and controversies in the field of human nutrition. Gen Ed Attributes: Natural Science Course (N)

### **NUTR 411 - Nutrition For Sports & Exercise. 3 Credit.**

Prereq., KIN 320 and junior standing and major in Integrative Physiology or Athletic Training.. Nutritional parameters of athletic performance including intervention planning, energy production, the energy nutrients, vitamins and minerals, principles of balanced diets, timing and composition of intakes, hydration, weight management strategies, and nutritional needs for special situations.

# Occupational Safety and Health (OSH) < University of Montana

## **OSH 110 - OSHA 10 Hour Safety Training. 1 Credit.**

Offered every semester. Offered at Missoula College. Course will cover the required elements of the OSHA10 General Construction Safety training as well as an introduction of Industry specific Workplace Safety expectations. Course graded only on CR/NCR basis, requiring full 15 hour attendance and successful completion of all OSHA exams at 70% or better.

## **OSH 130 - OSHA 130 Industrial Trades Safety Training. 3 Credits.**

Offered Missoula College West Campus in a face to face format with both classroom and applied training. Students will complete the requirements for an approved OSHA 30 Hour Safety Training Card, and complete training and certification in basic first aid, cardio-pulmonary resuscitation (CPR), proper use of Automated External Defibrillators (AED's), and complete pretesting for OSHA requirements on both counterbalanced and rough terrain forklift vehicles. basic hand and power tool safety, crane safety and hand signals, aerial lifts and learn strategies for participating in a culture of safety within the working environment. Additional topics include This course provides an overview of safe industrial practices, provides students with both classroom and hands-on experience in workplace safety for a variety of industries, and provides multiple Industry Recognized Credentials. construct a scaffold systems, material handling, load security, fall arrest equipment, confined spaces, and understanding of material safety data sheets. The course also covers essential skills for workplace readiness including, employer expectations, communication skills, problem solving, time management, labor market information, career explorations within the various construction and industrial industries, resumes, job searches, and interview skills.

## Parks, Tourism & Recreation Management (PTRM)

### **PTRM 141Y - National Parks and American Culture. 3 Credits.**

Offered autumn. This course introduces undergraduates to contemporary issues in managing the places and programs that make up the U.S. national park system. Students will learn about the variety of resources, values, viewpoints, and ideas that are represented in the more than 400 units of the national park system, which stretches from Guam to Maine and Alaska to the Virgin Islands. The role of the federal agency in charge of the parks, the National Park Service (NPS), will be explored, including its work in community recreation and historic preservation. Particular attention will be given to the social, cultural and historical context of how the National Park Service was developed and evolved. There are no pre-requisites.

Gen Ed Attributes: Democracy and Citizenship (Y)

### **PTRM 150 - First Year Seminar in Parks, Tourism, and Recreation Management. 1 Credit.**

Offered autumn. This course will explore issues related to recreation and tourism in western Montana. This is a field based course designed to get students outside the classroom. Students will have a chance to visit outdoor recreation areas and meet recreation and tourism managers.

### **PTRM 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PTRM 210S - Nature Tourism & Commercial Recreation. 3 Credits.**

Offered spring. Introduction to the tourism and commercial recreation industries. Provides initial link between the natural environment and business operations. Combination of introductory business philosophies, economics, and natural resource management into a framework for future reference and course work.

Gen Ed Attributes: Social Sciences Course (S)

### **PTRM 217S - Parks & Outdoor Recreation Management. 3 Credits.**

Offered autumn and spring. The management of land as an environment for outdoor recreation. Understanding the relationship between the visitor, resource base and management policies. Recreation planning on multiple use forest lands, parks, wilderness areas and private lands.

Gen Ed Attributes: Social Sciences Course (S)

### **PTRM 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PTRM 300 - Recreation Behavior. 3 Credits.**

Offered spring. Prereq., PTRM 217S. This course provides an understanding of recreation behavior in wildland and nature-based tourism oriented settings. Students will learn about theories/conceptual frameworks from social and environmental psychology and their application to visitor management issues in the wildland recreation and nature-based tourism fields.

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### **PTRM 310 - Natural Resource Interpretation and Communication. 3 Credits.**

Offered autumn. Prereq., COMX 111A or THTR 120A, junior or senior standing in PTRM or RECM. Principles, concepts, techniques essential to providing high quality interpretive programs in natural or cultural history.

### **PTRM 345X - Sustaining Human Society & Natural Environment. 3-6 Credits.**

Offered summer. These field-based, experiential classes focus on the environmental and conservation concerns, as well as the modern and traditional cultures, of Australia, New Zealand, or Fiji.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **PTRM 353 - Tourism, Livelihoods and Sustainability in Mountains. 3 Credits.**

Offered summer only. Coreq. NRSM 352. In this course we will explore the opportunities and challenges of development with particular reference to nature-based tourism and sustainability in an isolated but rapidly globalizing region of the Himalaya. Students will learn through extensive readings, class discussions, direct field experience (including living in a remote mountain village), meetings with development officials, sustainability activists and stakeholders in the region.

### **PTRM 355 - Wilderness Medicine And Risk Management. 5 Credits.**

This course will train students in injury and illness prevention in a backcountry setting while emphasizing risk management principles. The course also trains students in the treatment and long-term management of medical emergencies in the backcountry, including improvised litters and splints. Instructors cover decision making involved in dislocation reduction, medication administration, and evacuation protocols. Risk management topics include participant screening, emergency response plans, risk matrices, and incident reporting. Co-requisites include HHP 332, Emergency Medical Technician and Incident Management; and PTRM 356, Wilderness Rescue and Survival Skills.

### **PTRM 356 - Wilderness Rescue and Survival. 5 Credits.**

This course is ideal for outdoor leaders involved in extended backcountry trips and those individuals seeking employment with search and rescue units, ski patrols and wilderness trip leading organizations. Students will be prepared to handle emergencies in high-elevation, winter conditions as well as in tropical and swiftwater environments. They will also be prepared for extended care of patients and rescuers in remote and challenging environments. Students will study navigation including landform interpretation of maps and use of map rulers to determine lat/long and UTM coordinates, as well as practical use of maps, compass and GPS. The course includes 3 days of Swiftwater Rescue training, as well as 3 days of Level I Avalanche training. An overnight, winter rescue scenario typically in conjunction with Missoula County Sheriffs Search and Rescue team, as well as training in rescue helicopter operations with St. Patrick Hospitals LifeFlight medics, complete the suite of practical experiences. Co-Requisites include HHP 332, Emergency Medical Technician and Incident Management; and PTRM 355, Wilderness Medicine and Risk Management.

### **PTRM 380 - Recreation Administration & Leadership. 3 Credits.**

Offered spring. The theories, principles and practices that shape the administration of recreation opportunities offered through public, nonprofit and private agencies and organizations. Course content includes leadership roles of recreation managers, organizational structure, management, legality, risk management, staffing, communication and public relations.

### **PTRM 391 - Special Topics. 1-12 Credits.**

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(R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

### **PTRM 392 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Course material appropriate to the needs and objectives of the individual student.

### **PTRM 394 - Seminar. 1-4 Credits.**

(R-4) Offered intermittently. Variable topics by visiting scholars.

### **PTRM 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PTRM 407 - Managing Recreation Resources in Wilderness. 3 Credits.**

Examination of strategies to management recreation in a wilderness setting. Addresses management of visitor use and experiences, measuring and monitoring biophysical and social impacts, effective education and interpretation, and law enforcement. Level: Undergraduate

### **PTRM 418 - Winter Wilderness Field Studies. 3 Credits.**

Examination of wilderness values, management issues and strategies, winter ecology and snow science, risk management and group leadership, and traditional skills. Winter field course in the Swan Valley and Mission Mountains Wilderness. Level: Undergraduate-Graduate

### **PTRM 450 - Pre-Practicum Prof Prep. 1 Credit.**

Offered spring. A pre-practicum class to provide orientation for the practicum, PTRM 495. Level: Undergraduate

### **PTRM 451 - Tourism & Sustainability. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, one intermediate writing course and PTRM 210S, or consent of instructor. Theories and conceptual models are applied to analyzing relationships between the integration of planning theories to sustainability concepts. Level: Undergraduate

Gen Ed Attributes: Writing Course-Advanced

### **PTRM 482 - Wilderness & Protected Area Management. 3 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, one intermediate writing course and PTRM 217S, or consent of instructor. Examination of the origin, evolution, and application of the park concept on state, federal, and international levels. Evaluation of legislation, philosophy, and policy leading to consideration of goals, objectives, and strategies for wilderness and protected area management. Level: Undergraduate-Graduate

Gen Ed Attributes: Writing Course-Advanced

### **PTRM 484 - PTRM Field Measurement Tech. 3 Credits.**

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Offered autumn. Co-req. with either PTRM 485 or PTRM 451. Field measurement and management techniques critical in park, tourism & recreation management. Includes measurement of impacts on biophysical and social attributes of park, tourism & recreation settings. Level: Undergraduate

### **PTRM 485 - Recreation Planning. 3 Credits.**

Offered spring. Prereq., PTRM 217S and PTRM 300. Offered autumn. Needs of recreation opportunities and response to those needs through planning, demand assessment and resource analysis. Level: Undergraduate-Graduate

### **PTRM 486 - Entrepreneurship in Tourism and Recreation. 3 Credits.**

Offered spring. Prereq., PTRM 210S and PTRM 217. Together, commercial recreation and tourism represent a large portion of the economies of many cities, counties, states and countries. As such, the recreation and tourism industry contributes significantly to economies all over the world. In this course, we will examine breadth of commercial recreation and tourism enterprises and their economic impacts at all levels from the local to the global. In addition, we will explore the impacts of commercial recreation and tourism on our society and environment. Taking an entrepreneurial approach, we will explore and develop our understanding of business and marketing concepts as they relate to commercial recreation and tourism through real-world examples and case studies. Level: Undergraduate

### **PTRM 491 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, new courses or one-time offerings of current topics. Level: Undergraduate-Graduate

### **PTRM 492 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Individual study of research problems. Level: Undergraduate

### **PTRM 494 - Seminar. 1-4 Credits.**

Offered autumn and spring. Prereq., senior standing in wildlife biology or consent of instr. Analysis and discussion led by students of current topics in wildlife biology. Level: Undergraduate

### **PTRM 495 - Practicum in PTRM. 1-6 Credits.**

(R-15) Offered every term. Prereq., PTRM 380, PTRM 450, senior standing, and consent of instr. Supervised pre-professional practice in approved parks, tourism & recreation management agencies. Level: Undergraduate-Graduate

### **PTRM 498 - Internship. 1-6 Credits.**

Offered autumn and spring. Prereq., consent of instr. Extended classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate-Graduate

### **PTRM 499 - Senior Thesis. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr.; senior standing. Preparation of major paper based on study or research of a topic selected with an advisor according to needs and objectives of student. Level: Undergraduate-Graduate



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### **PTRM 500 - Conservation and Social Science Methods. 3 Credits.**

Offered autumn. Prereq., a course in statistics or consent of instr. The nature of scientific research, planning research projects, organization and presentation of research results. Level: Graduate

### **PTRM 510 - Professional Paper Research Methods. 3 Credits.**

### **PTRM 511 - Risk management and leadership in PTRM contexts. 3 Credits.**

Offered Autumn. This course is to provide students with an understanding of the interface between risk management and leadership concepts in the field of parks, tourism, and recreation. Working in outdoor settings presents a variety of challenges that can have diverse types and scales of risks. This class will orient students to the best practices in managing risks across PTRM settings and help students craft their own risk management plans. Effective leadership is critical in managing risk and to achieving desired outcomes. This class will focus on leadership models and provide students with opportunities to demonstrate effective leadership through critical thinking and application.

### **PTRM 512 - Human Behavior in Outdoor Recreation and Tourism. 3 Credits.**

Offered autumn. This course is to provide students with an understanding of the social, psychological, and behavioral constructs in the field of parks, tourism, and recreation management. The course will encompass historical, theoretical, and empirical foundations of relative to human behavior in park, recreation, and tourism settings with a focus on the attitudinal, social, and motivational theories as applied to leisure-related contexts.

### **PTRM 517 - Advanced Visitor Management. 3 Credits.**

Managing visitors in protected areas is an increasingly important. The U.S. National Park Service, for example, receives about 275 million visits per year. These visits impact both the parks and society on numerous levels. Many of the most perplexing issues associated with Protected Area Management are also visitor experience or access related. Visitors are managed to fulfill mandates, build constituencies for protected areas, generate income and improve the human condition. In the past four decades several visitor management strategies and tactics have been developed and evaluated. Examples of these strategies include changing physical places or facilities to accommodate use, changing the character of uses and visitors, emphasizing education or law enforcement, developing concessions etc. Within those broad strategies are also numerous tactics that have been tried in numerous contexts. Charging user fees, rationing use, using passive vs. active interventions into the visitor experience are tactical examples.

### **PTRM 525 - Evolving Foundations of Protected Area Management. 3 Credits.**

This course is about why the concept of nature protection has grown to a global phenomenon and how the idea of protection or preservation has evolved over time. Level: Graduate

### **PTRM 526 - Protected Area Planning in an Era of Turbulence & Complexity: Concepts & Principles. 3 Credits.**

In this course we will explore the varying dimensions of protected area planning in the world of 21st century change and complexity, providing participants with perspectives useful in assessing new ways of developing the processes underlying effective plans. Level: Graduate

### **PTRM 527 - Global Ecology, Conservation & Natural Resource Management in a Changing World. 3 Credits.**

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This course will first examine biological and physical environmental processes, then exploring these processes within the context of resource management and conservation, and finally focusing on the application of these learned skills to case studies, students will understand how to apply ecological theory to real world challenges in protected areas management and global conservation initiatives. Level: Graduate

### **PTRM 528 - Tourism & Protected Area Management: Striving for Sustainability. 3 Credits.**

This course will explore ideas of development and sustainability as they pertain to tourism in the context of protected areas. We will critically assess, through case studies and other readings, the opportunities and challenges for implementing sustainable tourism in protected area context from an economic, social and environmental perspective. Level: Graduate

### **PTRM 529 - Program Management. 3 Credits.**

This course is intended to be a capstone course for the Protected Area Distance Education Program. As such, the course will be the last in the sequence and will draw from the principles and concepts introduced in the previous courses. These principles and concepts will be applied in a real-world context in order to address a challenge or opportunity in a given protected area. Level: Graduate

### **PTRM 554 - Geographies of Tourism. 3 Credits.**

Consent of Instructor. This graduate level course will focus on geographic concepts such as place, space, and scale and their applications in tourism research. We will also cover spatial analysis techniques and their uses in tourism studies. The course will begin with an introduction to geography and its importance in tourism studies. Next, background on concepts and theories developed within the field of geography will be provided. From there we will begin to discuss ideas of space, place, landscapes and scale. In our discussion of scale we will focus on the politics of scale and ideas of globalization and the global-local nexus. This will lead into a discussion of networks and flows as they apply to tourism. We will also explore political geographies and gendered landscapes as they apply to tourism. Finally, we will explore some spatial analysis techniques used by geographers studying tourism. The course materials will be structured to give students information on how each topic is conceptualized by geographers, current theoretical debates relating to the topic and its applications in tourism research. The course will rely heavily on current literature, mainly from peer-reviewed journals and book chapters. Students will be expected to engage with these concepts through the literature in writing and discussion. Level: Graduate

### **PTRM 555 - Conservation and Development in Mountains. 2 Credits.**

Offered in odd numbered years. This course explores concepts and issues related to conservation and development in mountain regions. The course covers mountain geography, concepts of conservation and development and then explores conservation and development issues in mountain regions around the world.

### **PTRM 562 - Managing Recreation Resources Wilderness. 3 Credits.**

Same as FORS 562. Current research, theory, and management approaches to recreation management in wilderness, including monitoring and management of visitor impacts and experiences. Level: Graduate

### **PTRM 574 - Perspectives in Human Dimensions. 3 Credits.**

Consent of instructor. This course will provide graduate students with an understanding of multiple perspectives in human dimensions of natural resources. The course is intended to be broad in nature in order to provide students with a comprehensive understanding of the topics. Students will read and discuss

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foundational pieces by Orr and Leopold (among others) and explore newer readings on current research. The course will cover social psychological and sociological perspectives and discuss key issues such as scale, multidisciplinary research, sustainability and social diversity in natural resources. Students will be challenged to approach natural resources issues from multiple perspectives, not just the perspective they are most familiar with. Students will be able to communicate effectively among social scientists and be able to integrate diverse perspectives. Level: Graduate

### **PTRM 582 - Concept of Wilderness & PA. 3 Credits.**

(R-3) Offered autumn. Theoretical and philosophical imperatives for the establishment of different forms of parks, wilderness and protected areas. In-depth discussion of the objectives and purposes for management of these areas, and of the current criticisms and attacks on their intellectual foundation. Level: Graduate

### **PTRM 583 - Research & Development Tourism & Recreation. 3 Credits.**

This course will use Montana as a case study to understand tourism and recreation research and the tourism and recreation industry. From an applied research prospective, students will learn the intricacies of how to design a research program to support a tourism and recreation industry where the data and decision making tools for marketing professionals, land managers, planners, and political entities are generated. How do you build your relationships, work with advisory councils, pick your issues to study, design your methodologies, collect and analyze data, and tell the story so it is applicable to the industry yet objective and science driven? Level: Graduate

### **PTRM 584 - Sustainable Protected Area Management and Tourism. 3 Credits.**

This course will explore the intersection of social, cultural, environmental, and economic aspects of protected area management in relation to sustainability of resources, tourism, visitor management, conservation, and community development. Case study examples from diverse contexts, settings, and types of terrestrial and aquatic protected areas within the U.S. and around the world will illustrate the complexity of protected area management in a time of rapid change.

### **PTRM 594 - Conservation and Social Science Seminar. 1-2 Credits.**

(R-3) Offered Spring. Same as NRSM 594. Prereq. graduate standing. Presentations by students, faculty, and associates on issues and topics in their field. Level: Graduate

### **PTRM 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics. Level: Graduate

### **PTRM 596 - Independent Study. 1-10 Credits.**

(R-10) Offered every term. Prereq., consent of instr. Individual study or research problems. Level: Graduate

### **PTRM 597 - Research. 1-12 Credits.**

(R-12) Offered every term. Prereq., graduate standing. Independent graduate research in parks, tourism, and recreation management. Level: Graduate

### **PTRM 598 - Internship. 1-12 Credits.**

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(R-12) Offered every term. Prereq., consent of instr. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office. Level: Graduate

### **PTRM 599 - Professional Paper. 1-15 Credits.**

(R-15) Offered every term. Preparation of professional paper. Level: Graduate

### **PTRM 695 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PTRM 697 - Research. 1-15 Credits.**

(R-15) Offered every term. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **PTRM 699 - Thesis. 1-15 Credits.**

(R-15) Offered every term. Prereq., graduate standing. Preparation of thesis/dissertation. Level: Graduate

## Pharmacy (PHAR)

### **PHAR 100 - Intro to Pharmaceutical Practice for Techs. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., admission into Pharmacy Technology program. This course offers information regarding careers in pharmacy. It includes the history of pharmacy practice and defines roles of personnel relating to pharmaceutical services. Ethical standards of the occupation and federal and state laws regulating pharmacy practice with emphasis on Montana State Pharmacy Law regulating pharmacy technicians are studied. Day-to-day operations including preparation, maintenance, and storage of pharmaceuticals and records, and basic concepts of computer operations and latest technologies are reviewed. Skills will be developed with are necessary for the pharmacy technician to communicate effectively in the following ways: 1) as a representative of the profession of pharmacy, 2) as an intermediary between the pharmacist and patient, and 3) as an intermediary between the pharmacist and other health care professionals.

### **PHAR 101 - Pharmacy Calculations. 3 Credits.**

Offered autumn. Offered at Missoula College. Calculations used in pharmacy practice; includes various systems of weights and measures, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution, and concentration.

### **PHAR 102 - Pharmacology for Technicians. 6 Credits.**

Offered autumn. Offered at Missoula College. Prereq., admission into Pharmacy Technology program. Study of the properties, reactions, and therapeutic value of the primary agents in the major drug classes.

### **PHAR 104 - Pharmacy Dispensing Lab. 3 Credits.**

Offered autumn. Offered at Missoula College. Prereq., admission into Pharmacy Technology Program. Develop dispensing and distributive skills with hands-on lab, and lecture format.

### **PHAR 110N - Use & Abuse of Drugs. 3 Credits.**

Offered autumn and spring. Drug dependence and abuse.

Gen Ed Attributes: Natural Science Course (N)

### **PHAR 120 - Medication Safety. 3 Credits.**

Offered spring online only. Offered at Missoula College. Prereq., PHAR 100, 101, 102, 104 and second semester standing in Pharmacy Technology Program. This course will introduce students to national safety initiatives developed by the Institute of Medicine, The Joint Commission, The Institute of Safe Medicine Practices and others. This awareness will help students become part of the solution in promoting safe medication practices.

### **PHAR 121 - Preparation for the PTCB Exam. 1 Credit.**

Offered at Missoula College. Prereq., PHAR 100, PHAR 101, PHAR 102 and PHAR 104. This course will offer strategies in test taking, and help students refresh their knowledge in all knowledge areas included in the exam as identified by PTCB.

### **PHAR 191 - Special Topics. 1-6 Credits.**

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(R 16) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **PHAR 192 - Independent Study. 1-6 Credits.**

(R-6) Offered at Missoula College. Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **PHAR 198 - Internship: Pharmacy. 4 Credits.**

(R-8) Offered spring. Offered at Missoula College. Prereq., PHAR 100, 101, 102, 104 and second semester standing in Pharmacy Technology Program. Training and experience in either hospital, compounding, home infusion, nursing home or other alternative pharmacy settings under supervision of a pharmacist. Emphasizes special skills unique to that pharmacy setting.

### **PHAR 300 - Pharmacy Practice I. 4 Credits.**

Offered autumn. Prereq., M 162 and admission to the professional pharmacy program. An introduction to the prescription and pharmaceutical calculations and to the role of the pharmacist in systems involved in health care delivery.

### **PHAR 310 - Pharmacy Practice II. 2 Credits.**

Offered spring. Prereq., PHAR 300. Federal and state laws and regulations pertaining to pharmacy practice. Introductory dispensing laboratory.

### **PHAR 311 - Healthy People. 1 Credit.**

Offered spring. Prereq., first professional year standing in pharmacy. Determinants of health, teamwork, communication, reflection, and self- and peer-assessment methods are explored in the classroom, through writings, and team projects in the community.

### **PHAR 320 - American Indian Health Issues. 3 Credits.**

Offered spring. An overview of the health issues, health care delivery, health disparities, and social determinants of health that impact American Indians. Also, provides an overview in careers in health and cultural awareness for students.

### **PHAR 322 - Ayurvedic Medicine. 1 Credit.**

Ayurveda is an ancient East Indian tradition of health and healing that involves diet, lifestyle, and herbal supplements. This course will focus on understanding the basic principles of Ayurveda in terms of Dosha, diet, lifestyle, herbs, body therapies, and the disease process. Students will create an individualized lifestyle plan focusing on diet and lifestyle aimed to improve health and well-being.

### **PHAR 324 - Medicinal Plants. 2-3 Credits.**

Offered autumn. Plants and other natural substances which nourish, heal, injure, or alter the conscious mind.

### **PHAR 329 - Microbes & Medicines. 4 Credits.**

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Offered spring. Prereq., first professional year standing in pharmacy. Microorganisms that cause disease in humans plus the chemical characteristics, biochemical mechanisms, and pharmacological properties of drugs used in treating infections caused by microorganisms.

### **PHAR 331 - Pharmaceutics. 4 Credits.**

Offered spring. Prereq., first professional year standing. Physical pharmacy and dosage forms.

### **PHAR 341 - Pharmaceutical Pathophysiology I. 4 Credits.**

Offered autumn. Prereq., first professional year standing in pharmacy. Principles of anatomy, normal and abnormal physiology.

### **PHAR 342 - Pharmaceutical Pathophysiology II. 4 Credits.**

Offered spring. Prereq., PHAR 341. Continuation of 341.

### **PHAR 350 - Introduction to Drug Information. 1 Credit.**

Offered autumn. Prereq., WRIT 101 or equivalent, one intermediate writing course and first professional year standing in pharmacy. Introduction to sources of drug information and the use of medical literature and clinical guidelines to respond to drug information requests from patients and healthcare providers.

Gen Ed Attributes: Writing Course-Advanced

### **PHAR 360 - Pharmacy Practice Lab I. 1 Credit.**

Offered autumn. Prereq., first professional year standing and coreq., PHAR 300. This lab is designed to introduce the student to the technical and legal aspects of drug dispensing, prescription and OTC drug counseling, and sterile intravenous (IV) admixture in a simulated pharmacy environment.

### **PHAR 361 - Pharmaceutical Science Lab I. 1 Credit.**

Offered autumn. Prereq., first professional year standing and coreq., PHAR 300, PHAR 341. Laboratory experience in the pharmaceutical sciences.

### **PHAR 362 - Pharmaceutical Science Lab II. 1 Credit.**

Offered spring. Prereq., PHAR 361 and Coreq., PHAR 331 and 342. Continuation of 361.

### **PHAR 371 - Integrated Studies I. 1 Credit.**

Offered autumn. Prereq., first professional year standing in pharmacy. Small group conferences designed to develop professional skills while integrating material from other pharmacy courses.

### **PHAR 372 - Integrated Studies II. 1 Credit.**

Offered spring. Prereq., PHAR 371. Continuation of 371.

### **PHAR 381 - Pharmaceutical Biochemistry. 4 Credits.**

Offered autumn. Prereq., first professional year standing. Fundamental biochemistry from a pharmaceutical sciences perspective; management of genetic information, molecular structure and function, and metabolic reactions, especially as relating to drug actions and targets.

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### **PHAR 390 - Undergraduate Research. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

### **PHAR 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHAR 392 - Independent Study. 1-3 Credits.**

### **PHAR 395 - Pharmacy Practicum. 1-2 Credits.**

(R-3) Offered autumn and spring. Prereq., PHAR 300. Supervised professional experience in the Student Health Service Pharmacy.

### **PHAR 412 - Pharmacy Practice III. 2 Credits.**

Offered spring. Prereq., second professional year standing. The social, behavioral, cultural, and literacy factors involved in professional communication and patient care.

### **PHAR 421 - Medicinal Chemistry I. 3 Credits.**

Offered autumn. Prereq., second professional year standing or consent of instr. The chemistry of organic compounds used medicinally and their biochemical mechanisms of action.

### **PHAR 422 - Medicinal Chemistry II. 3 Credits.**

Offered spring. Prereq., PHAR 421. Continuation of 421.

### **PHAR 430 - Pharmacogenetics. 2 Credits.**

Offered each semester. Prereq., PHAR 341 and PHAR 381. The genetic basis of differential drug activity.

### **PHAR 432 - Clinical Pharmacokinetics. 3 Credits.**

Offered autumn. Prereq., second professional year standing. Principles of pharmacokinetics including the processes of ADME (absorption, distribution, metabolism, and elimination) and applications in the clinical setting.

### **PHAR 443 - Pharmacology & Toxicology I. 4 Credits.**

Offered autumn. Prereq., second professional year standing or consent of instr. Basic principles of pharmacology, toxicology and therapeutics.

### **PHAR 444 - Pharmacology & Toxicology II. 4 Credits.**

Offered spring. Prereq., PHAR 443. Continuation of PHAR 443.

### **PHAR 445 - Immunopharmacology/Immunotoxicology. 3 Credits.**

Offered in alternating years. Prereq., consent of instr. This course is designed to introduce advanced undergraduate students and professional pharmacy students to various aspects involved in the development and mechanisms of action of immunomodulatory drugs and chemicals.



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### **PHAR 451 - Therapeutics I. 3 Credits.**

Offered autumn. Prereq., second professional year standing; coreq., PHAR 471; prereq., PHAR 381, PHAR 331, PHAR 342. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

### **PHAR 452 - Therapeutics II. 3 Credits.**

Offered spring. Prereq., PHAR 451; coreq., PHAR 472; prereq. or coreq., PHAR 422, PHAR 432 and PHAR 444. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

### **PHAR 460 - Pharmaceutical Care Lab II. 1 Credit.**

Offered autumn. Prereq., second professional year standing, PHAR 310. Introduction to parenteral practice application, applied patient interview assessment, and communication skills for practice.

### **PHAR 463 - Pharmaceutical Care Lab III. 1 Credit.**

Offered spring. Coreq. PHAR 412. Practice counseling and patient-care skills with emphasis on non-prescription drugs and devices. Includes individual in-service presentations.

### **PHAR 471 - Integrated Studies III. 1 Credit.**

Offered autumn. Prereq., second professional year standing in pharmacy. Small group conferences designed to develop professional skills while integrating material from first and second year professional pharmacy courses.

### **PHAR 472 - Integrated Studies IV. 1 Credit.**

Offered spring. Prereq., PHAR 471. Continuation of 471. Offered for CR/NCR only.

### **PHAR 480 - Community Pharmacy IPPE. 3 Credits.**

(R-6) Offered every term. Prereq., completion of first professional year. Supervised professional experience in community pharmacy.

### **PHAR 481 - Hospital Pharmacy IPPE. 3 Credits.**

(R-6) Offered every term. Prereq., completion of first professional year. Supervised professional experience in a hospital pharmacy.

### **PHAR 484 - Introduction to Toxicology. 3 Credits.**

Offered autumn. Prereq., Biology, Chemistry, and Biochemistry; or consent of instr. Online. Introduction to environmental health and the principles of toxicology, including human toxic substance exposure, processing of toxic substances and the impact on cells and tissues including genetic and epigenetic factors. Graduate increment includes design of a research study in toxicology and leading class

### **PHAR 485 - Environmental and Rural Health. 3 Credits.**

Offered spring. Prereq., Biology, Chemistry, Biochemistry, and Intro. Toxicology; or consent of instr. Online. Principles, concepts and applications of environmental health, including methods and paradigm used in the field ranging from ecology to epidemiology, from toxicology to environmental psychology, and from

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genetics to ethics. This course provides students with a comprehensive introduction to environmental health.

### **PHAR 486 - Epidemiology and Clinical Translational Research. 3 Credits.**

Offered autumn. Prereq., Biology, Chemistry, Biochemistry, Statistics, and Intro. Toxicology; or consent of instr. Online. Introduction to the principles and methods for epidemiologic and clinical investigation, including biostatistical applications, conducting and interpreting epidemiological and clinical studies in environmental toxicology. Graduate increment includes design and analysis of an epidemiological study and leading class discussions.

### **PHAR 490 - Undergraduate Research. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

### **PHAR 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHAR 494 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. Varying topics.

### **PHAR 498 - Internship. 1-6 Credits.**

### **PHAR 505 - Pharmacy Practice IV. 3 Credits.**

Offered autumn. Co-req., PHAR 553. Prereq., third professional year standing in pharmacy. Applications of advanced drug therapy monitoring and disease state management. Level: Graduate

### **PHAR 506 - Pharmacy Practice V. 3 Credits.**

Offered spring. Prereq., PHAR 505. Aspects of pharmacy management, including human resources, quality improvement, financial, and administrative policies and procedures involved in providing patient care. Level: Graduate

### **PHAR 514E - Case Studies in Pharmaceutical Ethics. 3.000 Credits.**

Offered spring. Prereq., third professional year standing or consent of instr. A practical discussion of pharmacy ethics, as it relates to pharmacy practice. Level: Graduate

Gen Ed Attributes: Ethical & Human Values Course

### **PHAR 550 - Drug Literature Evaluation. 2 Credits.**

Offered autumn. Prereq., WRIT 101 or equivalent, one intermediate writing course and third professional year standing in pharmacy. Scientific and statistical evaluation of the drug and medical research literature to formulate solutions for patient-specific pharmacotherapy problems. Level: Graduate

Gen Ed Attributes: Writing Course-Advanced

### **PHAR 553 - Therapeutics III. 4 Credits.**

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Offered autumn. Prereq., PHAR 452, 472: coreq., PHAR 571, and third professional year standing. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care. Level: Graduate

### **PHAR 554 - Therapeutics IV. 4 Credits.**

Offered spring. Prereq., PHAR 553 and coreq., PHAR 572. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care. Level: Graduate

### **PHAR 556 - Psychopharmacotherapeutics. 2 Credits.**

Offered autumn. Prereq., PHAR 452 or consent of instr. A discussion of the more common childhood and adult psychiatric disorders with emphasis on a pharmacologic approach to their treatment. Level: Graduate

### **PHAR 559 - Public Health and Pharmacoeconomics. 3 Credits.**

Offered autumn. Prereq., third professional year or consent of instr. Covers concepts in public health, epidemiology, pharmacoeconomics, and outcomes research that shape health policy and professional practice. Level: Graduate

### **PHAR 560 - Pharmaceutical Care Lab IV. 1 Credit.**

Offered autumn. Coreq., PHAR 505. Practice in professional communication and pharmaceutical care interventions and recommendations. Level: Graduate

### **PHAR 563 - Pharmaceutical Care Lab V. 1 Credit.**

Offered spring. Coreq., PHAR 554. Practice in professional communication and pharmaceutical care interventions and recommendations. Level: Graduate

### **PHAR 565 - Pharmacy APPE Preparation. 3 Credits.**

Offered spring. Coreq., PHAR 563. Review and updates on pharmacotherapeutic topics with preparation for and orientation to the final experiential year of the professional pharmacy program. Level: Graduate

### **PHAR 571 - Integrated Studies V. 1 Credit.**

Offered autumn. Prereq., third professional year standing in pharmacy and coreq., PHAR 553. Small group conferences designed to develop the professional skills needed to practice pharmaceutical care while integrating material from the professional pharmacy curriculum. Level: Graduate

### **PHAR 572 - Integrated Studies VI. 1 Credit.**

Offered spring. Prereq., third professional year standing in pharmacy, coreq., PHAR 554. Small group conferences designed to develop professional skills while integrating material from other pharmacy courses. Level: Graduate

### **PHAR 579 - Community Pharmaceutical APPE. 6 Credits.**

(R-12) Offered every term. Prereq., completion of didactic courses in the Pharm. D. program. Supervised professional experience in the patient care functions of the pharmacist in the community pharmacy setting. Level: Graduate

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### **PHAR 580 - Hospital Pharmacy APPE. 6 Credits.**

(R-12) Offered every term. Prereq. Completion of didactic courses in the Pharm.D. program. Supervised professional experience in the patient care functions of the pharmacist in the hospital pharmacy setting. Level: Graduate

### **PHAR 581 - Inpatient APPE. 6 Credits.**

(R-12) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in the inpatient hospital setting. Level: Graduate

### **PHAR 582 - AMB Care APPE. 6 Credits.**

(R-16) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in the ambulatory care setting. Level: Graduate

### **PHAR 583 - Drug Information APPE. 6 Credits.**

(R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the provision of drug information by the pharmacist. Level: Graduate

### **PHAR 584 - Specialized Services APPE. 6 Credits.**

(R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in specialized practice settings, such as home infusion, compounding, and nuclear pharmacies.. Level: Graduate

### **PHAR 585 - Geriatric APPE. 6 Credits.**

(R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience with geriatric patients in the long term care and/or other pharmacy setting. Level: Graduate

### **PHAR 586 - Clinical Specialty APPE. 6 Credits.**

(R-16) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in specialty settings or with specialized groups of patients. Level: Graduate

### **PHAR 587 - Administrative APPE. 6 Credits.**

(R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the administrative aspects of providing pharmaceutical care. Level: Graduate

### **PHAR 588 - Research APPE. 6 Credits.**

(R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in a research setting. Level: Graduate

### **PHAR 589 - Education APPE. 6 Credits.**

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Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in teaching in a pharmacy curriculum. Level: Graduate

### **PHAR 591 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

### **PHAR 596 - Independent Study. 1-9 Credits.**

(R-9) Offered every term. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

## Philosophy (PHL)

### **PHL 101L - Introduction to Philosophy. 3 Credits.**

An introduction to philosophy through examination of the thought of selected great philosophers or traditional positions on classical philosophical problems.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **PHL 102L - Introduction to Existentialism. 3 Credits.**

An introduction to the philosophical writings of the major existentialists. Topics include the nature of the self, freedom, personal responsibility, authenticity, and moral value.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **PHL 110E - Introduction to Ethics. 3 Credits.**

An examination of the Western vision of morality through the careful study of selected writings from Aristotle, Kant and Mill. Additional works in ethics may supplement primary readings.

Gen Ed Attributes: Ethical & Human Values Course

### **PHL 112E - Introduction to Ethics and Environment. 3 Credits.**

An introductory-level ethics course with a special interest in the natural environment. The course will (a) introduce students to the three classical traditions in ethics - virtue, Kantianism, and utilitarianism, (b) ground these theories in questions about the moral status of non-humans and our moral duties to non-humans, (c) include an applied section that covers animal welfare, biotechnology, and other current topics.

Gen Ed Attributes: Ethical & Human Values Course

### **PHL 114E - Intro to Political Ethics. 3 Credits.**

An examination of the issues of political ethics through the careful study of selected writings from the three great Western political traditions: classical natural law theory, modern individualism, and contemporary distributive justice.

Gen Ed Attributes: Ethical & Human Values Course, Democracy and Citizenship (Y)

### **PHL 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHL 198 - Internship. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services Office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PHL 210E - Moral Philosophy. 3 Credits.**

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Prereq., philosophy major or minor, WRIT 101 (or higher) or equivalent or consent of instr. An examination of leading approaches to moral philosophy through a careful reading of classical texts in the Western tradition. A more thorough treatment of the material offered in PHL 110E. Intended primarily for philosophy majors and minors.

Gen Ed Attributes: Ethical & Human Values Course, Writing Course-Intermediate

### **PHL 233 - Intro to Logic: Deduction. 3 Credits.**

Understanding general principles of reasoning and the habits of clear and correct thinking. Emphasis on the analysis of the logical structure of claims in natural language and the skills of elementary deductive inference.

### **PHL 235 - Intro to Logic: Induction. 3 Credits.**

Prereq., PHL 233 or equivalent, or consent of instr. A study of the formal principles of reasoning from evidence.

### **PHL 241N - History & Philosophy of Science. 3 Credits.**

The epistemological and metaphysical developments of natural philosophy or science. The origins of science in ancient Greece, and its subsequent developments during the scientific revolution. Developments in biology, especially Darwinism and genetics, and developments in physics.

Gen Ed Attributes: Historical Studies, Natural Science Course (N)

### **PHL 261Y - History of Ancient Philosophy. 3 Credits.**

Introduction to the central works of Plato and Aristotle, with an overview of Presocratic philosophy.

Gen Ed Attributes: Democracy and Citizenship (Y)

### **PHL 262Y - History of Modern Philosophy. 3 Credits.**

A survey of the history of philosophy from Descartes to Kant, which includes other continental rationalists and the British Empiricists.

Gen Ed Attributes: Democracy and Citizenship (Y)

### **PHL 291 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHL 292 - Independent Study. 1-6 Credits.**

(R-6) Course material appropriate to the needs and objectives of the individual student.

### **PHL 298 - Internship. 1-6 Credits.**

(R-9) Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PHL 301 - Knowledge and Reality. 3 Credits.**

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(R-9) Prereq., upper-division standing or consent of instr. Selected topics in one or more of the following areas: epistemology (the study of knowledge), philosophy of science, metaphysics. Intended primarily for non-majors.

### **PHL 309E - The Art of Living. 3 Credits.**

Prereq., upper-division standing. This course examines the ancient Greek conception of philosophy as a way of life and explores some of the following ethical questions: What is happiness? What is a good life? How should I live? Should I fear death? What role should reason play in my life? What role should the emotions play? What is friendship? What is love? What is marriage? Course materials will be drawn from a mixture of traditional philosophical works (including works by Plato, Aristotle, Epicurus, Seneca) together with some philosophically challenging works of literature, film, and music. Students will be expected not only to examine these materials closely but also to reflect upon their own convictions about these matters and to try to adhere to the Delphic injunction to know thyself.

Gen Ed Attributes: Ethical & Human Values Course

### **PHL 311 - The Good, Right, Beautiful. 3 Credits.**

(R-9) Prereq., upper-division standing or consent of instr. Selected topics in one or more of the following areas: ethics, philosophy of mind/action, aesthetics. Intended primarily for non-majors.

### **PHL 316 - Historical Figures in Philosophy. 3 Credits.**

(R-9) Prereq., upper-division standing or consent of instr. Study of one or more historically significant philosophers. Intended primarily for non-majors.

### **PHL 317E - Law and Morality. 3 Credits.**

Prereq., upper-division standing or consent of instr. An examination of moral issues that arise in legal contexts, such as: justifications of state power to punish wrong doing, justifications for rights to private property or privacy, the nature of human rights.

Gen Ed Attributes: Ethical & Human Values Course, Democracy and Citizenship (Y)

### **PHL 318 - Applied Logic. 3 Credits.**

Analytical thinking skills involve the ability to assess reasons, arguments, and evidence provided in support of a claim. The course focuses on basic elements of both deductive and inductive logic. Students will develop their analytical thinking skills in logically assessing various forms of reasoning in various contexts: logic games, short arguments, and more developed reading excerpts -- independently of subject matter.

### **PHL 319E - Law and Discrimination. 3 Credits.**

Offered intermittently. Prereq., upper-division standing or consent of instr. An examination of the philosophical analyses of discrimination and how these analyses apply to discriminatory practices in the US legal system, including an investigation of which of these discriminatory practices are morally and legally wrong and why. The course may focus on one or more of the following: racism, sexism, ableism, and speciesism.

Gen Ed Attributes: Ethical Human Values Course, Democracy and Citizenship (Y), Cultural Intl Diversity (X)

### **PHL 321E - Philosophy & Biomedical Ethics. 3 Credits.**



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Prereq., upper-division standing or consent of instr. An examination of ethical problems raised by the practice of medicine and by recent developments in medically-related biological sciences.

Gen Ed Attributes: Ethical & Human Values Course

### **PHL 323 - Ethics of Climate Change. 3 Credits.**

This course examines some of the fundamental issues raised by global climate change and considers how environmental ethics might help to address these issues. Students will become acquainted with the essential elements of climate change science and be provided with an introduction to contemporary approaches to environmental ethics that have developed out of the primary ethical traditions of western thought: deontological (Kantian) ethics, utilitarian ethics, and virtue ethics. In addition, the course examines alternative understandings of the appropriate relationship between humans and the natural world including: ?Deep Ecology? and Native American perspectives.

### **PHL 327L - Aesthetics and the Arts. 3 Credits.**

Offered intermittently. Prereq., upper-division standing or consent of instr. This course provides a broad overview of aesthetics, otherwise known as the philosophy of art. It is appropriate for students with no prior background in philosophy. Artists and students who study art are encouraged to enroll. The primary goal will be to give students the conceptual tools to reflect more deeply on art and their relationship with it in a way that will make an impact on their daily lives going forward.

### **PHL 351 - Philosophy and Feminism. 3 Credits.**

Prereq., upper-division standing or consent of instr. Study of what distinguishes feminist from traditional approaches to ethics. May also examine other relevant areas of philosophy, including epistemology, political theory, philosophy of science and environment.

### **PHL 363 - Ancient Greek and Roman Philosophy. 3 Credits.**

Examination of the thought of the philosophers of Greece and Rome as expressed in original works read in English translation. Ancient philosophy studied within its historical, linguistic and cultural setting.

### **PHL 370 - Philosophy of Religion. 3 Credits.**

Prereq., upper-division standing or consent of instr. An examination of one or more of the classic problems of Western philosophy of religion, such as the traditional arguments for and against the existence of God, the relationship of faith and reason, the status of religious experience, the problem of evil, and the problem of reconciling divine omniscience with human freedom.

### **PHL 390 - Research. 1-9 Credits.**

(R-9) Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **PHL 391 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHL 392 - Independent Study. 1-9 Credits.**

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(R-9) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **PHL 394 - Seminar. 1-9 Credits.**

(R-9) Prereq., consent of instr. A review and discussion of current research. Topics vary.

### **PHL 398 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PHL 400 - Advanced Writing in Philosophy. 1 Credit.**

Offered intermittently. Prereq., WRIT 101 or equivalent, PHL 210, and senior standing or consent of instr. Coreq., any 400-level philosophy course (except PHL 498). Capstone writing course intended for senior philosophy majors.

Gen Ed Attributes: Writing Course-Advanced

### **PHL 403 - Early Wittgenstein. 3 Credits.**

Prereq., upper-division standing and PHL 233, or consent of instr. Reading and interpretation of selected early works of Wittgenstein.

### **PHL 404 - Later Wittgenstein. 3 Credits.**

Prereq., upper-division standing and PHL 233, or consent of instr. Reading and interpretation of selected later works of Wittgenstein.

### **PHL 407 - Epistemology. 3 Credits.**

Prereq., upper-division standing, PHL 210E and PHL 233, or consent of instr. Examination of philosophical issues involving knowledge and justified belief.

### **PHL 408 - Philosophy of Mind. 3 Credits.**

Prereq., upper-division standing, PHL 210E and PHL 233, or consent of instr. Examination of philosophical issues concerning the relation between mind and body.

### **PHL 412 - Ethics and Public Affairs. 3 Credits.**

Prereq., upper-division standing and PHL 110E or PHL 112E or PHL 114E or PHL 210E, or consent of instr. Examination of morally relevant issues in government, journalism, education and other social institutions. Issues considered may include just war theory, deception, confidentiality, conflict of interest, privacy, paternalism responsibilities in conflict with other institutions, and responsibilities across national boundaries, among others.

### **PHL 422 - Environmental Philosophy. 3 Credits.**

Prereq., upper-division standing and PHL 110E or PHL 112E or PHL 114E or PHL 210E, or consent of instr. Critical exploration of selected philosophical and literary texts pertinent to the ethics of human relationships with the natural environment.

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### **PHL 423 - Science and the Environment. 3 Credits.**

Offered intermittently. Prereq., upper-division standing or consent of instr. This course aims to equip environmentalists, or those with environmentalist leanings with some useful knowledge about how science works, its relation to values, modeling in science, and then foundational issues in ecology and climate science. Reading and interpretation of selected works. This course co-convenes with PHL 523. Level: Undergraduate

### **PHL 427 - Topics in Philosophy of Art. 3-4 Credits.**

(R-9) Prereq., upper-division or consent of instr. Examination of philosophical problems related to particular arts and discussion of the nature of the arts. Topics considered may include music, visual arts, literature, and film.

### **PHL 429 - Philosophy and Literature. 3 Credits.**

Prereq., upper-division standing and PHL 110E or PHL 112E or PHL 114E or PHL 210E, or consent of instr. Philosophical thought in selected works of literature.

### **PHL 445 - Central Issues in Philosophy of Science. 3 Credits.**

Prereq., upper-division standing, PHL 210E, and PHL 233, or consent of instr. A consideration of philosophical issues relating to the nature of modern physical science: method, explanation, theory, progress, space/time, causality, relation of science to philosophy.

### **PHL 449 - History of Moral and Political Philosophy. 3 Credits.**

(R-9) Prereq., upper-division standing and PHL 210E, or consent of instr. Reading and interpretation of selected writings in the history of moral philosophy and/or political philosophy.

### **PHL 450 - Contemporary Moral/Political Theory. 3 Credits.**

(R-9) Prereq., upper-division standing and PHL 210E, or consent of instr. Recent theories in ethics and their implications; recent work in political theory, emphasizing contemporary liberalism and its critics.

### **PHL 455 - Philosophy of Society and Culture. 3 Credits.**

Prereq., upper-division standing and PHL 110E or PHL 112E or PHL 114E or PHL 210E, or consent of instr. A philosophical examination of cultural forces shaping modern society, forces such as science, technology, or domesticity.

### **PHL 462 - Early Modern Philosophy. 3 Credits.**

(R-6) Prereq., upper-division standing, PHL 210E, and PHL 262Y, or consent of instr. Intensive study of the work of one or more of the major philosophers from the early modern period (Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume).

### **PHL 464 - Kant. 3 Credits.**

Prereq., upper-division standing, PHL 210E, and PHL 262Y, or consent of instr. Reading and interpretation of selected works.

### **PHL 465 - Plato. 3 Credits.**

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Prereq., upper-division standing, PHL 210E, and PHL 261Y, or consent of instr. Reading and interpretation of selected works.

### **PHL 466 - Aristotle. 3 Credits.**

Prereq., upper-division standing, PHL 210E, and PHL 261Y, or consent of instr. Reading and interpretation of selected works.

### **PHL 467 - 19th Century Continental Philosophy. 3 Credits.**

(R-6) Prereq., upper-division standing, PHL 210E, and PHL 262Y, or consent of instr. Intensive study of the work of one or more 19th century continental philosophers (such as Hegel, Schopenhauer, Kierkegaard, Marx, Nietzsche).

### **PHL 468 - 20th Century Continental Philosophy. 3 Credits.**

(R-9) Prereq., upper-division standing, PHL 210E, and PHL 262Y, or consent of instr. Intensive study of the work of one or more 20th century continental philosophers (such as Heidegger, Husserl, Sartre, Merleau-Ponty, Ricoeur, Derrida) or several texts representing a major movement in 20th century continental thought (such as Phenomenology, Existentialism, Hermeneutics, Post-structuralism).

### **PHL 469 - Rousseau. 3 Credits.**

Offered intermittently. Prereq., upper-division standing and PHL 210E, or consent of instr. Reading and interpretation of selected works. Level: Undergraduate-Graduate

### **PHL 470 - Hegel. 3 Credits.**

Offered intermittently. Prereq., upper-division standing, PHL 210E, and PHL 262Y, or consent of instr. Reading and interpretation of selected works. Level: Undergraduate-Graduate

### **PHL 472 - Thoreau. 3 Credits.**

Offered intermittently. Prereq., upper-division standing or consent of instr. Reading and interpretation of selected works. This course co-convenes with PHL 572. Level: Undergraduate

### **PHL 490 - Research. 1-9 Credits.**

(R-9) Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **PHL 491 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHL 492 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **PHL 494 - Seminar. 1-9 Credits.**

(R-9) Prereq., consent of instr. A review and discussion of current research. Topics vary.

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### **PHL 498 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PHL 499 - Senior Seminar. 3 Credits.**

(R-9) Prereq., WRIT 101 or equivalent, one intermediate writing course, senior standing and philosophy major or philosophy minor, or consent of instr. Research in problems in philosophy.

Gen Ed Attributes: Writing Course-Advanced

### **PHL 501 - Philosophy of Technology. 3 Credits.**

(R-6) Offered once every two years. Reading and interpretation of selected writings that address central issues in the philosophy of technology. Level: Graduate

### **PHL 502 - Topics in Value Theory. 3 Credits.**

(R-6) Offered once every two years. Reading and interpretation of selected writings in value theory. Level: Graduate

### **PHL 504 - Topics in Environmental Philosophy. 3 Credits.**

(R-9) Offered once every two years. Same as ENST 504. Critical study/discussion of current (as well as benchmark) texts and issues in environmental ethics, environmental politics, and the philosophy of ecology. Interdisciplinary; open to interested students from all disciplines. Level: Graduate

### **PHL 505 - Issues in the Anthropocene. 3 Credits.**

(R-6) Offered once every two years. Reading and interpretation of selected writings in contemporary environmental philosophy. Level: Graduate

### **PHL 506 - Philosophy of Law. 3 Credits.**

Offered intermittently. Reading and interpretation of selected writings in philosophy of law. Level: Graduate

### **PHL 507 - Philosophical Foundations of Ecology. 3 Credits.**

Offered once every two years. In this seminar we will look at some of the key papers in philosophy of ecology (and perhaps, more broadly, environmental philosophy). Some of the topics covered will be: whether nature can be thought to be in balance, the complexity-stability debate, the role and nature of models in ecology, whether there are laws of ecology, whether communities and ecosystems are "super-organisms" or simple aggregates, what biodiversity is and why we should care about it. Level: Graduate

### **PHL 510 - Philosophy Colloquium. 1 Credit.**

(R-2) Offered autumn and spring. Prereq., graduate standing. Discussion of issues related to environmental philosophy and the profession. Level: Graduate

### **PHL 523 - Science and the Environment. 3 Credits.**

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Offered intermittently. This course aims to equip environmentalists, or those with environmentalist leanings, with some useful knowledge about how science works, its relation to values, modeling in science, and then foundational issues in ecology and climate science. Reading and interpretation of selected works. This course co-convenes with PHL 423. Graduate students taking PHL 523 will complete additional requirements and their work will be of a more advanced nature. Level: Graduate.

### **PHL 572 - Thoreau. 3 Credits.**

Offered intermittently. Reading and interpretation of selected works. This course co-convenes with PHL 472. Graduate students taking PHL 572 will complete additional requirements and their work will be of a more advanced nature. Level: Graduate

### **PHL 590 - Research. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Directed individual research and study appropriate to the background and objectives of the student.

### **PHL 591 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PHL 592 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **PHL 593 - Professional Paper. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **PHL 594 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. A review and discussion of current research. Topics vary. Level: Graduate

### **PHL 598 - Internship. 1-12 Credits.**

(R-12) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. Level: Graduate

### **PHL 599 - Thesis. 1-6 Credits.**

(R-9) Offered every semester. Prereq., approval of a thesis proposal by the student's thesis committee. Level: Graduate

## Physical Therapy (P T)

### **P T 503 - PT and Health Care System. 2 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. An introduction to physical therapy and its relationship to the health care system. Topics include introduction to PT as a profession, teaching and learning, ethics, laws and professional issues in physical therapy. Level: Graduate

### **P T 510 - Applied Clinical Anatomy. 5 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Anatomy of the neuromusculoskeletal system and body cavities in relation to movement and function with clinical correlates. Course lab fee. Level: Graduate

### **P T 516 - Movement System Examination & Evaluation. 5 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Principles of musculoskeletal examination and evaluation including posture, palpation, measurement of ROM and muscle performance, assessment of muscle length, and joint play. Level: Graduate

### **P T 519 - Musculoskeletal Management I. 3 Credits.**

Offered spring. Enrolled in entry-level DPT program or permission of instructor. Principles of musculoskeletal examination, evaluation, and intervention. The focus is application of anatomic and biomechanical principles when examining posture and movement, identification of abnormal movement patterns, and analysis of underlying neuromuscular impairments. Level: Graduate

### **P T 520 - Development Through the Life Span. 2 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or permission of instructor. Presentation of changes in adults they progress through the lifespan. Includes the functional changes associated with aging, assessing and managing fall risk, performance and interpretation of functional outcome measures. Level: Graduate

### **P T 523 - Clinical Medicine I: Intro to Med. 1 Credit.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Introduction to medical screening and the PT exam within the patient/client Management model. Level: Graduate

### **P T 524 - Clinical Medicine II. 2 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Introduction to pharmacology, medical management of selected orthopedic and hematological conditions. Level: Graduate

### **P T 525 - Clinical Medicine III. 2 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Pathophysiology, medical and pharmacological management of oncological, immunological diseases and organ transplantation. Level: Graduate

### **P T 526 - Foundational Skills I. 3 Credits.**

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Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Basic skills of documentation, medical terminology, transfers, bed mobility, and gait assistive device use. Level: Graduate

### **PT 527 - Physical & Electrophysical Agents. 3 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or permission of instructor. Physiology, indications, contraindications, and application of electrotherapy and physical agents. Theory and application of electrodiagnostic and electrotherapeutic procedures. Level: Graduate

### **PT 529 - Clinical Biomechanics. 5 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. The principles of biomechanics as applied to the practice of physical therapy. Level: Graduate

### **PT 530 - Clinically Applied Exercise Physiology. 5 Credits.**

Offered spring. Enrolled in entry-level DPT program or permission of instructor. Principles and applications of the physiological adaptations to acute and chronic exercise stresses, exercise assessment/testing, prescription and progression of the exercise program, and the adaptations of exercise interventions in the clinical environment. Basic principles and application of Proprioceptive Neuromuscular Facilitation (PNF). Level: Graduate

### **PT 531 - Prosthetics. 2 Credits.**

Offered spring. Prereq. enrolled in entry-level DPT program or permission of instructor. Information pertinent to pathology, examination, and evaluation of patients with amputations and conditions requiring prosthetics. The basic components of the course include types of devices, fitting, exercise programs, gait analysis and gait training. An overview of upper extremity prosthetics will be provided. Level: Graduate

### **PT 532 - Foundational Skills II. 1 Credit.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Principles of soft tissue mobilization. Techniques covered include: superficial, petrissage, kneading, neuromuscular, friction massage and trigger point techniques. Instruction regarding indications, precautions, contraindications, draping, position, and privacy issues included. Level: Graduate

### **PT 533 - Pelvic Health PT. 1 Credit.**

Offered autumn. Prereq., enrolled in entry-level DPT program or permission of instructor. Examination, screening, and treatment of pelvic health issues including genitourinary issues, obstetrics, incontinence, and pelvic pain. Level: Graduate

### **PT 536 - Neurosciences. 5 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or permission of instructor. Anatomy of the head and neck, and neuroanatomy of the human nervous system with emphasis on evaluation of central nervous system lesions and pathological conditions, clinical applications to physical therapy. Level: Graduate

### **PT 560 - Clinical Reasoning I. 1 Credit.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Introduction to the clinical reasoning process in physical therapy, faculty research and scholarship options, and laboratory orientation. Level: Graduate



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### **PT 563 - Cardiopulmonary PT. 4 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. Cardiovascular and pulmonary pathology, pharmacology, and differential diagnosis. Physical therapy assessment and interventions for patients with cardiovascular and/or pulmonary disease. Level: Graduate

### **PT 565 - Pediatric Physical Therapy. 2 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Normal development throughout childhood. Physical therapy examination, evaluation and intervention of children with neuromotor and musculoskeletal dysfunction including physical therapy for children in school systems. Level: Graduate

### **PT 567 - Neurorehabilitation I. 3 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. Neurologic physical therapy assessment and intervention of adults. Principles of neuroplasticity, motor control, motor learning and application to physical therapy neurorehabilitation. Includes wheelchair seating and mobility assessment and prescription. Level: Graduate

### **PT 568 - Neurorehabilitation II. 3 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Neurologic physical therapy assessment and intervention of adults. Principles of neuroplasticity, motor control, motor learning and application to physical therapy neurorehabilitation. Includes assessment and treatment of vestibular system and conditions. Level: Graduate

### **PT 569 - Musculoskeletal Management II. 5 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. Principles of musculoskeletal examination, evaluation, and intervention for the hip, knee, ankle, foot, lumbar spine, and SI joint. Level: Graduate

### **PT 570 - Psychosocial Aspects of Health and Wellness. 2 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. Psychosocial aspects of health and wellness including social/societal determinants for people from diverse backgrounds throughout the lifespan. Level: Graduate

### **PT 572 - Practice & Administration. 3 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Practice management and operations explored with emphasis on strategic planning, human resource management, regulatory compliance/risk management, quality improvement and clinical coding and billing instruction. Level: Graduate

### **PT 573 - Musculoskeletal Management III. 6 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Principles of musculoskeletal examination, evaluation, and intervention for the shoulder, elbow, wrist, hand, temporomandibular joint (TMJ), thoracic and cervical spine. Level: Graduate

### **PT 576 - Clinical Reasoning II. 2 Credits.**

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Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. This course will build on the foundations established in Clinical Reasoning I and utilize reflections from the first summer Clinical Experience. The principles of evidence based practice (EBP), including the application of evidence and the creation of evidence (both quantitative and qualitative), limitations of EBP and its role in the changing health care environment, critical appraisal of the literature, statistical knowledge, and weighing evidence for clinical decision making will be discussed. Issues related to clinical and research ethics will also be discussed. Level: Graduate

### **P T 582 - Clinical Clerkship. 1 Credit.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. A mix of classroom and clinical experiences to introduce students to the expectations of professional practice. CR/NCR grading. Level: Graduate

### **P T 583 - Integrated Clinical Experience I. 2 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. An integrated, part-time clinical experience with emphasis on patient evaluation, treatment and professional development. Only CR/NCR grading. Level: Graduate

### **P T 584 - Integrated Clinical Experience II. 2 Credits.**

Offered autumn. Prereq., enrolled in entry-level DPT program or consent of instructor. An integrated, part-time clinical experience with emphasis on patient evaluation, treatment and professional development. CR/NCR grading. Level: Graduate

### **P T 587 - Full-Time Clinical Experience I. 6 Credits.**

Offered summer. Prereq., enrolled in entry-level DPT program or permission of instructor. Eight weeks of full-time clinical experience with emphasis on developing patient evaluation and treatment skills. Only CR/NCR grading. Level: Graduate

### **P T 589 - Full-Time Clinical Experience II. 6 Credits.**

Offered summer. Prereq., enrolled in entry-level DPT program or permission of instructor. Eight weeks of full-time clinical experience with emphasis on learning about administrative issues, problem solving, time management, and communication skills. Continuation of development of patient treatment and evaluation skills. Only CR/NCR grading. Level: Graduate

### **P T 626 - Clinical Medicine IV. 2 Credits.**

Offered autumn. Prereqs., enrolled in entry-level DPT program or consent of instructor. Course will focus on the role of the physical therapist in a Direct Access environment. Pathology, differential screening, pharmacotherapeutics, evaluation and management of gastrointestinal, endocrine/metabolic and hepatobiliary disease. Level: Graduate

### **P T 627 - Prevention & Wellness Education. 3 Credits.**

Offered autumn. Prereqs., enrolled in entry-level DPT program or consent of instructor. Nutrition, health promotion, patient and support network education, exercise/fitness, disease and injury prevention, life span emphasis and adaptive sports. Level: Graduate

### **P T 629 - Clinical Medicine V. 2 Credits.**

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Offered autumn. Prereqs., enrolled in entry-level DPT program or consent of instructor. Course will focus on evaluation, differential screening, pharmacology, and management of integumentary disorders. Includes wound assessment and treatment. Level: Graduate.

### **P T 631 - Health Science Education Foundations I: Educational Theory and Methods. 3 Credits.**

Offered autumn, spring. First in the four course series for the HSEL Certificate. This course highlights the history of health sciences professional education, exploring in particular the evolution of teaching/learning methodologies used in the health sciences to best engage student learners. Level: Graduate

### **P T 632 - Health Science Education Foundations II: Instructional Design. 3 Credits.**

Offered autumn, spring. This course examines health science curriculum design, including discussion of development of mission, vision, philosophy and outcomes. Level: Graduate

### **P T 633 - Health Science Education Foundations III: Evaluation & Outcome Assessment. 3 Credits.**

Offered autumn, spring. Online. This course examines the education evaluation process at several levels including student performance, and satisfaction, course/student/graduate outcomes, curriculum assessment and program outcomes. Level: Graduate

### **P T 634 - Health Science Education Foundations IV: Leadership Essentials to Transform Education. 3 Credits.**

Offered autumn, spring. Online. This course fosters leadership development within the contemporary academic and clinical education environments, explores the unique characteristics of higher education and guides participants to become transformational leaders skilled to reframe health science education, guide educational practices and promote educational excellence. Level: Graduate

### **P T 635 - Health Science Education: Faculty Evaluation & Development. 2 Credits.**

Offered autumn, spring. Online. This course examines in detail methods of faculty assessment beginning with hiring, development, assessment and supervision. Level: Graduate

### **P T 636 - Health Science Education: Leading Teams, the Art of Influencing Others. 2 Credits.**

Offered autumn, spring. Online. This course explores how to form, manage and motivate teams with awareness of gender, generational and developmental considerations. Level: Graduate.

### **P T 641 - Introduction to Lifestyle Intervention Health. 2 Credits.**

Offered autumn, spring. Prereq., must be enrolled in LIH certificate program. Introduces students to Lifestyle Intervention Health [LIH] programs and builds the context for physical-therapist led lifestyle intervention teams to include, exploring the public health context for LIH teams, identifying target patient populations, and presenting the core competencies required to participate in and lead LIH teams. Level: Graduate

### **P T 642 - Defining Framework for Measuring, Planning and Delivering Health-Focused Lifestyle Interventions. 2 Credits.**

Offered autumn and spring. Prereq., must be Enrolled in LIH certificate program and P T 641 required. Introduces students to health belief and behavior models as well as a structured methodology for assessment of health status for individuals and at a community level. Level: Graduate

**P T 643 - Principles of Interpersonal and Organizational Health Coaching. 2 Credits.**

Offered autumn and spring. Prereq., must be enrolled in LIH certificate program and P T 641 and P T 642 required. Introduction to health coaching principles, motivational interviewing, and the influence of health belief and behavior models on developing individual and community level action plans. Level: Graduate

**P T 644 - Competencies for LIH Teams. 2 Credits.**

Offered autumn and spring. Prereq., must be enrolled in LIH certificate and P T 641, P T 642, and P T 643 required. Provides students with an overview of the knowledge, skills, and abilities in four specific content areas that are important for ensuring success of physical therapist led LIH teams. Level: Graduate

**P T 645 - Developing a Lifestyle Intervention Health Business Plan. 2 Credits.**

Offered autumn and spring. Prereq., must be enrolled in LIH certificate program and P T 641, P T 642, P T 643, and P T 644 required. Guides students through a structured process to develop an achievable strategic plan for a physical therapist-led LIH program or business. Level: Graduate

**P T 649 - Lifestyle Intervention Health Capstone Experience. 2 Credits.**

Offered spring and autumn. Prereq., must be enrolled in LIH certificate program and P T 641, P T 642, P T 643, P T 644, and P T 645 required. Provides students with an onsite capstone experience that is designed to provide students the opportunity to interact with faculty in a variety of classes, discussions and presentations. Students will also present their business plans to and receive feedback from faculty with significant LIH business experience. Level: Graduate

**P T 650 - Screening for Medical Disorder. 2 Credits.**

Offered autumn and spring. Prereq. Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding appropriate referral of a patient to a physician for evaluation of medical conditions outside the scope of physical therapy. Level: Graduate

**P T 651 - Medical Imaging in Rehabilitation. 2 Credits.**

Offered autumn, summer. Prereq. Enrolled in t-DPT curriculum. Provide the physical therapy clinical learner with the tools needed to interpret and apply specialized medical imaging information to the rehabilitation patient. Level: Graduate

**P T 652 - Pharmacology in Rehabilitation. 2 Credits.**

Offered autumn, spring. Prereq., in a PT curriculum. Provide clinical learners with the primary drug classes and the physiologic basis of their action. Level: Graduate

**P T 653 - Legal and Ethical Issues. 1 Credit.**

Offered spring, summer. Prereq. Enrolled in a PT curriculum. Foundational information as to the legal, ethical and administrative decision making process often facing physical therapists in clinical practice. Level: Graduate

**P T 654 - Trends in Clinical Decisions. 1 Credit.**

Offered autumn, spring. Prereq. Enrolled in a PT curriculum. Provide ways to utilize the Guide to PT Practice for effective and efficient clinical decision making. Level: Graduate

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### **PT 655 - Business and Marketing. 2 Credits.**

Offered spring, summer. Prereq. Enrolled in a PT curriculum. Enhance the PT clinical learners appreciation of business and management practices needed to succeed within the current healthcare landscape. Level: Graduate

### **PT 656 - Coding and Reimbursement. 1 Credit.**

Offered autumn, summer. Prereq., enrolled in a PT curriculum. Educate the clinical learner in analyzing reimbursement of current billing, accounts receivable, collection procedures and use of proper coding. Not required for students completing the post-professional DPT program practicing outside the US. Level: Graduate

### **PT 657 - Professionalism. 2 Credits.**

Prereq. Enrolled in a PT curriculum. This seminar course provides the clinical learner with the opportunity to analyze and discuss the roles/responsibilities and challenges/opportunities inherent in doctoral level physical therapy practice. Only CR/NCR grading. Level: Graduate

### **PT 658 - Critical Assessment. 3 Credits.**

Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Develop skills in the application of evidence-based practice as a model for effective clinical decision-making. Level: Graduate

### **PT 659 - Capstone Project. 4 Credits.**

Prereq. Enrolled in t-DPT curriculum. Development of the skills needed by physical therapists to fulfill their role as effective participants in the research process. Guide student through the capstone case report completion process. Only CR/NCR grading. Level: Graduate

### **PT 660 - Management of Musculoskeletal Disorders. 2 Credits.**

Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with musculoskeletal disorders. Level: Graduate

### **PT 661 - Management of Cardiovascular or Pulmonary Disorders. 2 Credits.**

Offered autumn, spring and summer. prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities and decision-making processes regarding appropriate patient management of persons with cardiovascular and/or pulmonary disorders. Level: Graduate

### **PT 662 - Management of Neuro Disorders. 2 Credits.**

Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with neurological disorders. Level: Graduate

### **PT 663 - Management of Integumentary Disorders. 2 Credits.**

Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with integumentary disorders. Level: Graduate

### **PT 664 - Wellness and Health Promotion. 2 Credits.**

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Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patient/client involvement with wellness and health promotion. Level: Graduate

### **P T 672 - Research in PT. 2 Credits.**

Offered autumn and spring. Prereqs., enrolled in entry-level DPT program or consent of instructor. Data analysis, writing of research manuscript, presentation of project. Level: Graduate

### **P T 676 - Clinical Reasoning III. 3 Credits.**

Offered autumn. Prereqs., enrolled in entry-level DPT program or consent of instructor. Course addresses elements of clinical mastery, professional development, career options, ethics and patient advocacy. Each student develops and presents a case report. Level: Graduate

### **P T 679 - Trends & Scholarly Activity. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereqs., enrolled in entry-level DPT program or consent of instructor. Students are required to complete at least 6 credits during their 2nd and 3rd years. Seminar sections that focus on advanced clinical topics in physical therapy and/or engagement in research with an individual faculty advisor. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

### **P T 680 - Clinical Internship. 11 Credits.**

Offered spring. Prereq., enrolled in entry-level DPT program or consent of instructor. Final summative experience is a 15 week clinical internship. Includes writing and presentation of case study or special project. CR/NCR grading. Level: Graduate

### **P T 690 - Research. 1-10 Credits.**

(R-10) Prereq., consent of instr. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

### **P T 691 - Special Topics. 1-6 Credits.**

(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

### **P T 692 - Independent Study. 1-4 Credits.**

(R-6) Prereq., enrolled in entry-level DPT program or consent of instructor. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

### **P T 694 - Seminar/Workshop. 1-6 Credits.**

(R-6) Traditional or CR/NCR grading as determined by course instructor. Level: Graduate

### **P T 699 - Thesis/Dissertation. 1-10 Credits.**

(R-10) Offered every term. Only CR/NCR grading. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Physics (PHSX)

### **PHSX 101 - Freshman Physics Experience. 1 Credit.**

Offered autumn. This course is intended for all incoming students either majoring in physics or considering majoring in physics. This seminar course presents an overview of the undergraduate experience as a physics major. Seminars on recent developments in physics and astronomy and opportunities for undergraduate involvement in research and instruction are included.

### **PHSX 102 - Preparation for Physics. 2 Credits.**

Intended primarily for students who wish to learn or review preparatory material to succeed in the algebra-based physics sequence. Basic physical quantities and their mathematical relationships will be explored along with development of problem solving skills. The course also includes selected mathematical topics, such as trigonometry and vectors that are essential for studying physics.

### **PHSX 105N - Fundamentals of Physical Science. 3 Credits.**

Offered every term. Offered at Missoula College. An introduction to the basic principles of physics, chemistry, and nuclear reactions with emphasis on the scientific method and process. Topics include scientific process; motion; work and energy; heat and temperature; and waves (sound and light); atomic structure; the periodic table of elements; chemical bonding and nomenclature; chemical formulas and equations; and solutions. Knowledge of basic algebraic functions, decimals, and scientific notation is recommended. Suitable for students with little science background.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 141N - Einstein's Relativity. 3 Credits.**

Offered spring. Prereq., working knowledge of high school physics and high school calculus, or consent of instr. Modern theoretical study of space, time, the principle of relativity, and its implications. Analysis of apparent paradoxes, and applications to particle physics.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHSX 192 - Independent Study. 1-6 Credits.**

### **PHSX 198 - Internship. 1-9 Credits.**

(R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PHSX 205N - College Physics I. 4 Credits.**

## University Of Montana

Offered autumn and spring. Prereq., M 122 or M 151 or ALEKS  $\geq 5$  or M03-Maplesoft Calculus score  $\geq 15$ , and prereq. or coreq. PHSX 206N. Mechanics, sound, and heat. For non-physical science majors. This course satisfies the lecture portion of medical school requirements in general physics. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 206N - College Physics I Laboratory. 1 Credit.**

Offered autumn and spring. Prereq. or coreq., PHSX 205N. Mechanics, sound, and heat. For non-physical science majors. This course satisfies the laboratory portion of medical school requirements in general physics. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 207N - College Physics II. 4 Credits.**

Offered autumn and spring. Prereq. PHSX 205N and prereq. or coreq., PHSX 208N. Electricity, magnetism, light, and modern physics. For non-physical science majors. This course satisfies the lecture portion of medical school requirements in general physics. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 208N - College Physics II Laboratory. 1 Credit.**

Offered autumn and spring. Prereq., PHSX 206N, prereq. or coreq., PHSX 207N. Electricity, magnetism, light and modern physics. For non-physical science majors. This course satisfies the laboratory portion of medical school requirements in general physics. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 215N - Fundamentals of Physics with Calculus I. 4 Credits.**

Offered autumn. Prereq. or coreq., PHSX 216N and M 171 or equiv. This course satisfies the lecture portion of medical and technical school requirements in general physics. Mechanics, fluids, waves and sound. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 216N - Physics Laboratory I with Calculus. 1 Credit.**

Offered autumn. Coreq., PHSX 215N. This course satisfies the laboratory portion of medical and technical school requirements in general physics. Mechanics, fluids, waves, and sound. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 217N - Fundamentals of Physics with Calculus II. 4 Credits.**



## University Of Montana

Offered spring. Prereq., PHSX 215N, and prereq. or coreq. PHSX 218N, and prereq. or coreq., M 172 or equivalent. This course satisfies the lecture portion of medical and technical school requirements in general physics. Heat, electricity, magnetism, and light. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N.

Gen Ed Attributes: Natural Science Course (N)

### **PHSX 218N - Physics Laboratory II with Calculus. 1 Credit.**

Offered spring. Prereq., PHSX 215N, coreq., PHSX 217N. This course satisfies the laboratory portion of medical and technical school requirements in general physics. Heat, electricity, magnetism, and light. Credit not allowed for both PHSX 215N/PHSX 218N and PHSX 205N/PHSX 208N. Gen Ed Attributes: Natural Science Lab Course (N).

### **PHSX 291 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHSX 292 - Independent Study. 1-9 Credits.**

(R-9) Course material appropriate to the needs and objectives of the individual student.

### **PHSX 301 - Intro Theoretical Physics. 3 Credits.**

Offered spring. Prereq., M 273 and Prereq., or coreq., PHSX 217N-218N or PHSX 207N - PHSX 208N. Selected topics from applied linear algebra, ordinary and partial differential equations, vector analysis, complex variables, and Fourier series. Applications to classical mechanics, electromagnetism, and quantum mechanics.

### **PHSX 311 - Oscillations and Waves. 2 Credits.**

Offered autumn. Prereq., PHSX 217N-PHSX 218N or PHSX 207N- PHSX 208N; Prereq., or coreq., M 273. Detailed study of oscillations and waves at the intermediate level, to develop physical intuition and mathematical skills needed for analyzing a wide range of periodic phenomena encountered in physics.

### **PHSX 320 - Classical Mechanics. 3 Credits.**

Offered spring. Prereq., or Coreq., PHSX 301. Topics in classical mechanics at the intermediate level, emphasizing Lagrangian and Hamiltonian dynamics.

### **PHSX 323 - Intermediate Physics Lab. 3 Credits.**

Offered spring. Prereq., PHSX 217N- PHSX 218N or PHSX 207N- PHSX 208N, and PHSX 311. Laboratory course in the application of analog and digital electronics to experimental physics, with additional emphasis on data analysis techniques.

### **PHSX 327 - Optics. 3 Credits.**

Offered spring. Prereq., PHSX 311. Intermediate level study of light and optics, including geometrical optics, wave optics, optical instruments, coherence, polarization, and special topics.

### **PHSX 330 - Communicating Physics. 3 Credits.**

## University Of Montana

Offered spring even-numbered years. Prereq., WRIT 101 or equivalent, one intermediate writing course, and PHSX 217N - PHSX 218N or PHSX 207N - PHSX 208N. Oral and written communication skills in physics, to include teaching high school and college physics, presenting seminars, and writing technical and non-technical physics articles.

Gen Ed Attributes: Writing Course-Advanced

### **PHSX 333 - Computational Physics. 3 Credits.**

Offered spring odd-numbered years. Prereq., PHSX 217N-218N or PHSX 207N-208N; coreq., any upper-division PHSX course. Solution of advanced problems in physics using computational methods. Students will learn a variety of numerical methods, including FORTRAN programming techniques.

### **PHSX 343 - Modern Physics. 3 Credits.**

Offered autumn. Prereq., PHSX 217N?PHSX 218N or PHSX 207N?PHSX 208N and prereq., or coreq., M 273. Includes historical background for development of modern physics and an introduction to quantum mechanics, atomic and nuclear physics. Credit not allowed for graduate degree in physics.

### **PHSX 390 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered intermittently. Directed individual research and study appropriate to the background and objectives of the student.

### **PHSX 391 - Special Topics. 1-12 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PHSX 392 - Honors Physics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Independent research in topics of current interest in physics.

### **PHSX 423 - Electricity & Magnetism I. 3 Credits.**

Offered autumn. Prereq, PHSX 301. Electricity and magnetism at the intermediate level.

### **PHSX 425 - Electricity & Magnetism II. 3 Credits.**

Offered spring. Prereq., PHSX 423. Continuation of PHSX 423. Electricity and magnetism at the intermediate level.

### **PHSX 444 - Advanced Physics Lab. 3 Credits.**

Offered autumn. Prereq., PHSX 461; PHSX 323 suggested but not required. Advanced experiments in classical and modern physics, including optics, spectroscopy, laser science, atomic, nuclear, and particle physics, Data analysis techniques for experimental scientists. Recommended for students entering graduate school in any experimental science.

### **PHSX 446 - Thermodynamics & Statistical Mechanics. 3 Credits.**

Offered spring even-numbered years. Prereq., PHSX 343. Topics in thermodynamics and statistical mechanics.

## University Of Montana

### **PHSX 451 - Elementary Particle Physics. 3 Credits.**

Offered alternate odd years. Prereq., PHSX 301 and PHSX 343. This course will provide a sound introduction to the Standard Model of particle physics introducing students to the fundamental particles, fundamental forces, and the Feynman calculus.

### **PHSX 456 - General Relativity. 3 Credits.**

Offered periodically dependent upon faculty availability and student interest. Mountain Campus. Prereq., PHSX 141N or PHSX 343, M 221 or PHSX 301. An introduction to Einstein's gravity: the theory of general relativity. Students will be introduced to the concept of gravity as a manifestation of the curvature of spacetime. The course includes development of tensor calculus and the formulation of the Einstein equation with applications to black holes, gravitational lensing, cosmology, and gravitational waves.

### **PHSX 461 - Quantum Mechanics I. 3 Credits.**

Offered autumn. Prereq., PHSX 311, PHSX 343; prereq. or coreq., M 311 or M 221. Introduction to quantum mechanics. Topics include Schrodinger equation, piecewise constant potential, harmonic oscillator, hydrogen atom, angular momentum theory, electron spin.

### **PHSX 462 - Quantum Mechanics II. 3 Credits.**

Offered spring. Prereq., PHSX 461 or consent of instr. Advanced topics in quantum mechanics including linear vector spaces and Dirac notation, quantum dynamics, time-dependent perturbation theory, and scattering theory.

### **PHSX 490 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered intermittently. Directed individual research and study appropriate to the background and objectives of the student.

### **PHSX 491 - Special Topics. 3 Credits.**

(R-6) Offered intermittently. Prereq., PHSX 141N or PHSX 343, PHSX 301, or consent of instr. Studies of a topic in advanced modern physics. The topic chosen will vary according to instructor.

### **PHSX 492 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. University omnibus option for independent work.

### **PHSX 499 - Senior Capstone Seminar. 1 Credit.**

Offered autumn. Prereq., junior or senior standing in physics. Each student will present a seminar on research performed prior to or during their senior year.

### **PHSX 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PHSX 597 - Research. 1-6 Credits.**

(R-9) Offered intermittently. Prereq., consent of instr. Research in selected physics topics. Level: Graduate

### **PHSX 598 - Internship. 1-9 Credits.**

## University Of Montana

(R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **PHSX 599 - Thesis. 1-9 Credits.**

(R-9) Offered intermittently. Thesis preparation and execution. Level: Graduate

## Political Science (PSCI)

### **PSCI 151 - Intro to Civic Engagement. 2 Credits.**

This course is an extensive service learning course that requires students to conduct at least 55 hours of volunteer work. Students participate in community needs analysis, organization analysis, and long term volunteer work.

### **PSCI 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PSCI 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **PSCI 210S - Intro to American Government. 3 Credits.**

Offered autumn and spring. Constitutional principles, structures, and the political processes of the national government.

Gen Ed Attributes: Social Sciences Course (S), Democracy and Citizenship (Y)

### **PSCI 220S - Intro to Comparative Government. 3 Credits.**

Offered every term. Not open to senior level political science majors except with consent of instr. Introduction to the basic political concepts, themes, values and dilemmas as they apply to the world's diverse societies and cultures.

Gen Ed Attributes: Social Sciences Course (S), Democracy and Citizenship (Y)

### **PSCI 230X - Intro to International Relations. 3 Credits.**

Offered autumn and spring. Review of the evolution of the nation-state system and survey of contemporary international actors, issues and forces for stability and change.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **PSCI 250E - Intro to Political Theory. 3 Credits.**

Offered spring. Analysis of the various attempts (from Plato to Marx) to explain, instruct, and justify the distribution of political power in society. Emphasis is placed upon those theories whose primary concern is to define the nature of the "good" society.

Gen Ed Attributes: Ethical & Human Values Course

### **PSCI 311 - Revolution & Reform in Modern China. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Survey of modern Chinese history 1799-present. Emphasizes institutional transformation of the state, social movements, and the imperial legacy. Blends social-scientific and historical approaches to China's periodic reforms and revolutions. Essential for further study of modern Chinese politics.

## University Of Montana

### **PSCI 320 - Experimental Offering: Comparative Politics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of comparative politics.

### **PSCI 322 - Politics of Europe. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Comparative analysis of parliamentary forms of government and politics with emphasis on Great Britain, France and Germany.

### **PSCI 325 - Politics of Latin America. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Latin American politics from both historical and contemporary perspectives.

### **PSCI 326 - Politics of Africa. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Development of the political systems of Africa. Analysis of the interaction between African and Western social, political, and economic forces. Consideration of African political thought.

### **PSCI 327 - Politics of Mexico. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. A review of contemporary politics of Mexico from the Revolution to the present.

### **PSCI 328 - Politics of China. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Institutions and political development in China.

### **PSCI 330 - Experimental Offering: International Relations. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of international relations.

### **PSCI 332 - Global Environmental Politics. 3 Credits.**

Offered fall. Prereq. PSCI 230X and junior standing or consent of instructor. This course focuses on the unique set of collective action problems faced by global actors in the governance of the environment and the institutions they use to overcome those problems. Themes include the tragedy of the commons, climate change, and environmental security.

### **PSCI 334 - International Security. 3 Credits.**

Offered Spring. Prereq. PSCI 230 and junior standing or consent of instr. Explores the meaning, sources, and future of human, national, and international security. Considers a range of historical and contemporary threats (interstate war, civil war, terrorism, crime, natural disaster, human accident, disease, and deprivation), assesses the vulnerability of individuals and states to each threat, and evaluates national and international strategies to reduce them.

### **PSCI 335 - American Foreign Policy. 3 Credits.**

## University Of Montana

Offered intermittently. Prereq., PSCI 230X and junior standing or consent of instr. American diplomatic, economic and defense policies since World War II and their significance in international politics.

### **PSCI 336 - European Union. 3 Credits.**

Offered spring intermittently. Prereq junior standing or consent of instructor. Historical and contemporary analysis of political and economic integration in Europe with a focus on the political system of the European Union.

### **PSCI 337 - Model United Nations. 3 Credits.**

Offered autumn. Prereq., sophomore standing or consent of instr. History and structure of the UN. Contemporary global problems, and the UN's role in addressing them. Class has both active learning and service learning dimensions. Students plan, organize and run the annual Montana Model UN high school conference.

### **PSCI 340 - Experimental Offering: American Government. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of American government.

### **PSCI 341 - Political Parties and Election. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing or consent of instr. Political party organization, nominations, campaigns and elections in the United States.

### **PSCI 342 - Media, Public Opinion, Polling. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing or consent of instr. Study of the role played by mass media in shaping public opinion, policy agendas, and governmental institutions.

### **PSCI 344 - State and Local Government. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing or consent of instr. Analysis of American state and local government with emphasis on governmental organization, intergovernmental relations, local government powers, and self-government charters. Special attention to Montana.

### **PSCI 345 - American Political System. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. This course explores the theoretical ideas that informed the founding of the American political system, how that system developed over time, and the contemporary challenges facing American democracy and its national institutions. We will focus our attention on federalism, Congress, the Presidency, the Judiciary, and political parties.

### **PSCI 346 - American Presidency. 3 Credits.**

Offered autumn. Prereq., PSCI 210S. The constitutional foundation and evolution of the executive branch, the structure of the office and executive functions and powers.

### **PSCI 348 - US Multicultural Politics. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Examines the politics of diversity in the U.S., including national community, identity, citizenship, immigration, assimilation, and racial issues such as voting rights, affirmative action, segregation and integration, and public opinion.

## University Of Montana

### **PSCI 349 - Montana Government and Politics. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S. This course offers an overview of Montana politics and government, with a focus on the state's political history, constitutional structure, political institutions, campaigns and elections, and

### **PSCI 350 - Experimental Offering: Political Theory. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of political theory.

### **PSCI 352Y - American Political Thought. 3 Credits.**

Offered spring. Prereq., PSCI 250E or and junior standing or consent of instr. The study of representative political thinkers is used to illustrate the theme of American democracy as a multifaceted experiment with self-government.

Gen Ed Attributes: Democracy and Citizenship (Y)

### **PSCI 354 - Contemporary Issues in Political Theory. 3 Credits.**

(R-6) Offered intermittently in autumn. Prereq., PSCI 250E and junior standing or consent of instr. and junior standing. Topics vary. Research and assessment of current political and social issues through the study of a representative text and related literature.

### **PSCI 360 - Experimental Offering: Public Administration. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or onetime offerings in the subfield of public administration or policy.

### **PSCI 361 - Public Administration. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing or consent of instr. Legal and institutional setting of the administrative system; dynamics of organization and processes of public management.

### **PSCI 365 - Public Policy Issues and Analysis. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Examines a variety of public policy issues including economic, social welfare, health care, environmental and criminal justice policy. Emphasis is placed on substantive policies and policy analysis.

### **PSCI 370 - Courts and Judicial Politics. 3 Credits.**

Offered autumn. Prereq., PSCI 210S and junior standing. Introduction to American courts with emphasis on judicial policy making.

### **PSCI 377- Global Health Issues. 3 Credits.**

Offered spring. Treats current public-health challenges in industrialized and low-income countries, including chronic and infectious illnesses. In comparative perspective, the course explores the individual, environmental, resource, and governance context of public-health policy, interventions, and outcomes and address questions of human rights and ethics, health equity and justice, regional problems and contributors, and the concerns of vulnerable populations along with possibilities for health advocacy.



## University Of Montana

### **PSCI 381 - State Formation. 3 Credits.**

Offered intermittently. Prereq., PSCI 220S and junior standing or consent of instr. This course examines the concept of the `state? and evaluates explanations for the emergence and proliferation of this form of organization throughout the world. Questions: what is the `state?? What is the relationship of the state to the rest of `society?? How has the state affected or altered human behavior and belief? What are the political-economic institutions most associated with the `state?? What is/has been the role of the state in promoting industrialization and economic development and how has the process of industrialization in turn affected the state?

### **PSCI 391 - Special Topics. 1-9 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PSCI 398 - Internship. 1-6 Credits.**

Offered every term. Prereq., sophomore standing and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Offered credit/no credit only. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate.

### **PSCI 400 - Advanced Writing in Political Science. 1 Credit.**

(R-3) Offered autumn and spring. Prereq., WRIT 101 or equivalent, one intermediate writing course and junior standing or consent of instr. Coreq., any upper-division political science course. Designed for political science students to satisfy their upper-division writing expectation for the major or for students desiring additional experience in writing.

Gen Ed Attributes: Writing Course-Advanced

### **PSCI 420 - Experimental Offering: Comparative Politics. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of comparative politics.

### **PSCI 428 - Climate Policies: China & U.S.. 3 Credits.**

Offered spring. Prereq., junior standing or consent of instr. Explores historic, current, and future greenhouse-gas emissions of the United States and China, reasons why both are the two largest CO2 emitters, and prevailing national and subnational government policies and nongovernmental actions that affect emissions mitigation and adaptation. Level: Undergraduate-Graduate

### **PSCI 430 - Experimental Offering: International Relations. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of international relations.

### **PSCI 431 - Politics of Global Migration. 3 Credits.**

## University Of Montana

Offered intermittently. Prereq., junior standing or consent of instr. Explores of the elective and forced migration of peoples within countries and across national boundaries. Geographical coverage includes Asia, North America, Africa, and Europe. Attention to policy, development, health, and gender issues surrounding economic and political migration.

### **PSCI 433 - International Law & Organization. 3 Credits.**

Offered intermittently. Prereq. PSCI 230 and junior standing or consent of instr. Introduction to classical principles and contemporary issues of the law of nations and the organizations created to facilitate international cooperation.

### **PSCI 440 - Experimental Offering: American Government. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of American government.

### **PSCI 442 - Environmental Policy. 3 Credits.**

Offered intermitently. Prereq., PSCI 210S and junior standing or consent of instr. This course surveys environmental politics and policy, primarily in the United States. We examine the nature and scope of environmental, energy, and natural resource problems; contrasting perspectives on their severity and policy implications; the goals and strategies of the environmental community and its opponents; public opinion on the environment; scientific, economic, political, and institutional forces that shape policymaking and implementation; approaches to environmental policy analysis; and selected issues in environmental policy both within the U.S. and globally.

### **PSCI 443 - Politics of Social Movements. 3 Credits.**

Offered spring. Prereq., junior standing or consent of instr. The role of social movements in shaping the politics of power, reflected in public policy, electoral politics, relations of class, race, and gender, and people's understanding of the world and their place in it.

### **PSCI 444 - American Political Participation. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing or consent of instr. Examines of the individual and institutional factors affecting voter turnout, the influences on voter decision making, and non-electoral forms of participation in the United States.

### **PSCI 445 - Political Psychology. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Applies psychological theories such as personality, emotion, cognition, and social influence to political attitudes and actions, including political opinion formation, conformity, prejudice, genocide, and political leadership.

### **PSCI 448 - Health Care Policy. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Focuses on sociopolitical environment influencing health policy in the United States including health politics and policy development, political structure and process, health care financing, public opinion and special interest groups, political leadership, policy reform and global health.

### **PSCI 450 - Experimental Offering: Political Theory. 1-9 Credits.**

## University Of Montana

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or one-time offerings in the subfield of political theory.

### **PSCI 452 - Utopianism and its Critics. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Examination of classic and contemporary utopias, from Plato's Republic to Barbara Goodwin's "Justice by Lottery" as well as their critics.

### **PSCI 453 - Modern Political Theory. 3 Credits.**

Offered autumn. Prereq., PSCI 250E and junior standing or consent of instr. Analysis of Hobbes, Locke, Rousseau, Burke, James and John Stuart Mill, Marx and Lenin with regard to their "modern" views of the purpose(s) of political inquiry, the nature of citizenship and popular sovereignty. Particular attention to contemporary implications of ideas.

### **PSCI 456 - Chinese Politics & Societal Thought. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Chinese thought from the sixth century BCE to the present with specific attention to political philosophy and social criticism. Emphasis on changing Confucian tradition, encounter with Western thought, and understanding deep roots of contemporary discourse.

### **PSCI 457 - Classical & Medieval Political Philosophy. 3 Credits.**

Offered autumn. Prereq., junior standing and consent of instr. The classical western tradition, beginning with the ancient Greeks, spanning the Christian era, and ending with the high Renaissance period. Examination of the political ideas/values of these different times, exploring broad questions concerning human nature, the origins of the state, and the meaning of legitimate authority. Co-convenes with PSCI 557.

### **PSCI 460 - Experimental Offering: Public Administration. 1-9 Credits.**

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental or onetime offerings in the subfield of public administration or policy.

### **PSCI 461 - Administrative Law. 3 Credits.**

Offered intermittently. Prereq., PSCI 210S and junior standing. The legal foundations of public administration with emphasis on legislative delegation, administrative rulemaking and adjudication, judicial review, and public participation.

### **PSCI 462 - Human Resource Management. 3 Credits.**

Offered intermittently. Prereq., junior standing or consent of instr. Essential elements of human resource management, including analysis and evaluation of work, and the selection, management, and evaluation of public employees.

### **PSCI 463 - Development Administration. 3 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. Functions and processes of public administration in the Third World. Focus on alleviating poverty and underdevelopment. Includes project design and development planning activities.

### **PSCI 468 - Public Policy Cycle. 3 Credits.**

## University Of Montana

Offered intermittently. Prereq., Junior standing or consent of instr. Follows specific policy problem through each stage of the public policy cycle, including how policy is formulated in the legislative branch, implemented by the executive branch and reviewed by the judicial branch.

### **PSCI 469 - Ethics and Public Policy. 3 Credits.**

Offered intermittently spring. Prereq., junior standing or consent of instr. Focuses on the ethical challenges faced by public servants in government agencies.

### **PSCI 471 - American Constitutional Law. 3 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. Survey of U.S. Supreme Court's interpretation of the U.S. Constitution's provisions on separation of powers, federalism, civil rights, and civil liberties.

### **PSCI 474 - Civil Rights. 3 Credits.**

Offered intermittently. Prereq., PSCI 471 and junior standing or consent of instr. Intensive analysis, discussion, and writing about key U.S. Supreme Court constitutional cases on expression, religion, privacy, criminal justice, and discrimination.

### **PSCI 480 - Research Goals and Strategies. 3 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. We explore the main methods used in political science research, focusing on research design, best research practices, and pitfalls in research. Students develop their own research design as the final course project. PSCI 480 can be counted as a Required Upper-Division Field Course in any of the five PSCI subfields (comparative government, international relations, political theory, public administration and public policy, or American government) if students write a reading analysis focused on methods in a particular subfield and complete a final research design paper in the same subfield.

### **PSCI 481 - Origins of Democracy and Authoritarianism. 3 Credits.**

Offered intermittently. Prereq., PSCI 220S and junior standing or consent of instr.. This course examines the meaning of the terms "democracy" and "authoritarianism" in a way that permits measurement and analysis, then seeks to explain conditions under which such regimes or political systems emerge.

### **PSCI 482 - Politics of the World Economy. 3 Credits.**

Offered intermittently. Prereq., PSCI 220S or PSCI 230X and junior standing or consent of instr. This course introduces concepts, tools, and problems in international and comparative political economy. In particular, it examines `economic? relations among `states? (these terms are in quotes because we will consider them in depth). Co-convened with PSCI 582.

### **PSCI 491 - Special Topics. 1-3 Credits.**

(R-9) Offered intermittently. Prereq., junior standing or consent of instr. Experimental offerings of new courses, or one-time offerings of current topics.

### **PSCI 492 - Independent Study. 1-3 Credits.**

(R-6) Offered every term. Prereq., nine credits in political science courses numbered at the 300- or 400-level and consent of instr. Research in fields appropriate to the needs and objectives of the individual student. Level: Undergraduate.

## University Of Montana

### **PSCI 494 - Seminar. 1-6 Credits.**

### **PSCI 498 - Internship/Cooperative Education/Omnibus. 1-6 Credits.**

Offered every term. Prereq., sophomore standing and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Offered credit/no credit only. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Undergraduate.

### **PSCI 520 - Comparative Government. 3 Credits.**

Offered spring. Prereq., graduate standing or consent of instr. Concentrated reading and examination of selected subject areas in the field of comparative government. Level: Graduate

### **PSCI 521 - Globalization. 3 Credits.**

Offered intermittently. Prereq., senior or graduate standing or consent of instr. Critical examination of contemporary globalization topics from a number of theoretical and political perspectives. Topics include but are not limited to international political economy, security, social movements, democratization, international development, climate change, immigration, and global governance. Level: Graduate

### **PSCI 524 - Management and Policy Skills. 3 Credits.**

Offered spring. Focus on developing the skills required of managers in nonprofit and government organizations, such as competency in self-assessment, oral and written presentations, managing stress, communicating supportively, motivating, managing conflict, empowering and delegating, succeeding in multicultural contexts, and participating in interviews. With consent of the instructor, undergraduates can enroll in the course, and it can be counted as a Required Upper-Division Field Course in Public Administration and Public Policy. Level: Graduate

### **PSCI 530 - International Relations. 3 Credits.**

Offered autumn. Concentrated reading and examination of selected subject areas in the field of international relations. Level: Graduate

### **PSCI 540 - American Government. 3 Credits.**

Offered spring. Concentrated reading and examination of selected subject areas in the field of American government. Level: Graduate

### **PSCI 550 - Political Theory. 3 Credits.**

Offered intermittently. Concentrated reading and examination of selected subject areas in the field of political theory. Level: Graduate

### **PSCI 553 - Modern Political Theory. 3 Credits.**

Offered autumn. Covers political thinkers from the 16th c., beginning with Thomas Hobbes, to the early 20th century, ending with Marx. Graduate students will consider a fundamental question: what is the purpose of political inquiry? A fundamental question precisely because what people take to be the purpose of political theory determines what they study, who they study, and how they study it. Co-convening course with PSCI 453. Level: Graduate

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### **PSCI 557 - Political Science Theory Graduate Seminar. 3 Credits.**

Offered autumn semester. This co-convening course examines canonical "classical" political thinkers from Plato to Machiavelli. Graduate students will consider a fundamental question: what is the purpose of political inquiry? A fundamental question precisely because what people take to be the purpose of political theory determines what they study, who they study, and how they study it. Co-convenes with PSCI 457.

### **PSCI 580 - Research Goals and Strategies. 3 Credits.**

Offered autumn. Prereq., graduate standing or consent of instr. We explore the main methods used in political science research, focusing on research design, best research practices, components of effective research design, and pitfalls in research. Students develop their own research design as the final course project. This course co-convenes with PSCI 480; graduate students must take PSCI 580, which includes additional readings in concepts and applications of research methods, class meetings with the instructor, analyses of weekly readings, and a more extensive and theoretically developed research design paper. Level: Graduate

### **PSCI 582 - Politics of the World Economy. 3 Credits.**

Offered intermittently. This introduces concepts, tools, and problems in international and comparative political economy. In Particular, it examines 'economic? relations among `states? (the terms are in quotes because we will consider them in depth). Co-convened with PSCI 482.

### **PSCI 586 - MA Research Project. 1-4 Credits.**

(R-6) Offered every term. Prereq., consent of instructor. Offered as Credit/No Credit only. Level: Graduate

### **PSCI 594 - Seminar. 1-9 Credits.**

(R-9) Offered intermittently. Topic varies. Level: Graduate

### **PSCI 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PSCI 596 - Independent Study. 1-6 Credits.**

(R-12) Offered every term. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **PSCI 597 - Applied Research Project. 1-4 Credits.**

### **PSCI 598 - Internship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Offered credit/no credit only. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

### **PSCI 599 - Thesis. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Psychology (PSYX)

### **PSYX 100S - Intro to Psychology. 3 Credits.**

Offered every term. Offered on Mountain Campus and at Missoula College. Introduction to the scientific study of behavior in humans and other animals. Credit not allowed for both PSY 100S and PSYC 100S.

Gen Ed Attributes: Social Sciences Course (S)

### **PSYX 105 - Careers in Psychology. 1 Credit.**

Offered intermittently. Exploration of the various careers available in the general area of mental health research and practice.

### **PSYX 120 - Introduction to Psychological Research Methods. 3 Credits.**

Offered every term. Prereq or Coreq., PSYX 100S. Experimental and other quantitative methods employed in the scientific study of behavior.

### **PSYX 161S - Fundamentals of Organizational Psychology. 3 Credits.**

Offered intermittently. Offered at Missoula College. Foundation in the psychological processes that influence behavior of people in organizational settings.

Gen Ed Attributes: Social Sciences Course (S)

### **PSYX 191 - Special Topics. 1-6 Credits.**

(R 6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **PSYX 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **PSYX 222 - Psychological Statistics. 3.000 Credits.**

Offered every term. Prereq., PSYX 120; M 115, M 121, M 151, M 162, or 171. Application of statistical techniques to psychological data. Credit not allowed for both PSYX 222 and SOCI 202.

### **PSYX 230 - Developmental Psychology. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., PSYX 100S. The study of human physical, cognitive and psychosocial development throughout the life span. Content covers major theories, the influence of genetics, and the environment from a chronological aspect. Appropriate for Social Work, Nursing, Addiction Studies, Education, and Psychology.

### **PSYX 233 - Fundamentals of Psychology of Aging. 3 Credits.**

Offered intermittently. An overview of theories and research findings in the psychology of adulthood and aging.

### **PSYX 238 - Adolescent Psychology. 3 Credits.**

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Offered spring online. Offered at Missoula College. Prereq., PSYX 100S or PSYX 230S. This course is designed to provide an introduction to the physical, social, emotional, and cognitive developmental changes that occur during adolescence, as well as their relationships and cultural influences. Appropriate for students in Addiction Studies, Psychology, Social Work, Education, and other disciplines where a study of the adolescent is desired.

### **PSYX 240 - Fundamentals of Abnormal Psychology. 3 Credits.**

Offered face-to-face in autumn and online in spring. Offered at Missoula College. Prereq., PSYX 100. This course provides a broad introduction to abnormal psychology, which includes defining abnormality, examining the history of abnormal psychology, identifying how abnormal psychology relates to other disciplines in psychology, exploring major research methods used in abnormal psychology, discussing various mental illnesses and their potential causes and possible treatments, and applying major abnormal psychological findings to practical problems.

### **PSYX 250N - Fundamentals of Biological Psychology. 3 Credits.**

Offered every term. Prereq., PSYX 100S. Introduction to the study of how psychological processes are supported by biological processes. Mechanisms across levels of analysis, from cells to individuals, are addressed.

Gen Ed Attributes: Natural Science Course (N)

### **PSYX 270 - Fundamentals of Psychology of Learning. 3 Credits.**

Offered intermittently. Prereq., PSYX 100S. Basic theory and research on the nature of animal learning and behavior.

### **PSYX 280 - Fundamentals of Memory and Cognition. 3 Credits.**

Offered intermittently. Prereq., PSYX 100S. The acquisition and uses of knowledge. An examination of research and theories of human learning, memory, and thinking.

### **PSYX 290 - Supervised Research. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr.

### **PSYX 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PSYX 292 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr.

### **PSYX 294 - Seminar/Workshop. 1 Credit.**

(R 3) Offered intermittently. Prereq., consent of instr.; coreq., another psychology course. Taken in conjunction with another psychology course to provide additional content and discussion for honors students. Consent of the corequisite course instructor is required for this course.

### **PSYX 298 - Internship. 1-6 Credits.**



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(R-6) Offered every term. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PSYX 320 - Advanced Psychological Research Methods. 3 Credits.**

Offered every term. Prereq., WRIT 101 or equivalent, one intermediate writing course and PSYX 222 or STAT 216. An appreciation of the experimental approach to the scientific study of behavior through student-conducted experiments.

Gen Ed Attributes: Writing Course-Advanced

### **PSYX 330 - Child Development. 3 Credits.**

Offered every term. Prereq., PSYX 100S. The study of human biological, cognitive, and social-emotional development from the prenatal period through adolescence. Content covers major theories, research methods, and empirical findings fundamental to Developmental Psychology. Psychology, Communicative Sciences and Disorders, Social Work, Nursing, Education, and Health and Human Performance.

### **PSYX 340 - Abnormal Psychology. 3 Credits.**

Offered every term. Prereq., PSYX 100S. Gain a better understanding of, and appreciation for, variations in human behavior as well as major classifications of mental disorders and different diagnoses. This course explores the historical development of classification systems for behavior disorders and students will develop an understanding for the current diagnostic system, basic treatment approaches, and how to think critically about its strengths and limitations. Current controversies in the field of abnormal psychology will also be explored.

### **PSYX 345 - Child & Adolescent Psych Disorders. 3 Credits.**

Offered intermittently. Prereq., PSYX 100S. Study of causes, characteristics, assessment and treatment of emotional, social and intellectual disorders. The age span studied will range from infancy through adolescence.

### **PSYX 348 - Psychology of Family Violence. 3 Credits.**

Offered spring. Prereq., PSYX 100S. Same as WGS 385. Exploration of theoretical explanations for the presence of violence in American families; research and interventions in such areas as child physical and sexual abuse, battering of women, marital rape, spousal homicide, etc.

### **PSYX 352 - Comparative Psychology. 3 Credits.**

Offered autumn. Prereq., PSYX 250N or PSYX 270. Advanced evaluation and analysis of animal behavior through the synthesis of theory, research, and methods found in comparative psychology, behavioral biology, ethology, and sociobiology.

### **PSYX 356 - Human Neuropsychology. 3 Credits.**

Offered spring. Prereq., PSYX 250N. Study of the organization of the nervous system, functional neuroanatomy, neuropathology, neurological disorders, behavioral neurology, and clinical neuropsychology.

## University Of Montana

### **PSYX 360 - Social Psychology. 3 Credits.**

Offered every term. Individual behavior as a function of interpersonal interaction.

### **PSYX 362 - Multicultural Psychology. 3 Credits.**

Offered intermittently. Current theories and research on culture, race, and ethnicity, and how the sociocultural context influences psychological processes.

### **PSYX 376 - Principles of Cognitive Behavioral Modification. 3 Credits.**

Offered intermittently. Prereq., PSYX 270S. Study of basic principles, assumptions, methodology and applications of behavior modification. Discussion of current literature relevant to behavioral assessment and treatment of major psychological disorders.

### **PSYX 377 - Personalized Student Instruction. 3 Credits.**

Offered intermittently. Prereq., consent of instr. Experience with the personalized student instruction method of teaching, gained through participating as a proctor in the introductory psychology course.

### **PSYX 378 - Intro to Clinical Psychology. 3 Credits.**

Offered intermittently. Prereq., PSYX 340. This course offers a closer look into clinical psychology as both a science and a profession and the integration of both. Learn what distinguishes clinical psychology from other mental health professions and understand the differences between treatment approaches and theoretical orientations. Students will learn basic aspects of professional roles and relationships in helping professions as well as practice relevant skills in thinking about, and discussing, clinical situations.

### **PSYX 382 - Forensic Psychology. 3 Credits.**

Offered spring. Prereq., PSYX 100S. This course examines the many areas of forensic psychology, or the application of psychological concepts and theories to the legal system. This interface will be explored with an emphasis on empirical research findings from cognitive, social, experimental, and clinical psychology. Topics covered will include the variety of roles that psychologists play in the criminal justice system; the identification and evaluation of criminal suspects; the accuracy of eyewitness memory; the process of jury selection and decision-making; mental illness, competency to stand trial, and the insanity defense; criminal sentencing; and offender rehabilitation.

### **PSYX 383 - Health Psychology. 3 Credits.**

Offered intermittently. Prereq., PSYX 100S and PSYX 250N. This course will provide an overview of the growing field of health psychology, with particular attention to the biological, psychological, and social determinants of health. The course will also provide overviews of major illnesses for which psychologists can and do play a major role and will examine the tools and techniques that clinical health psychologists employ in medical settings.

### **PSYX 385 - Psychology of Personality. 3 Credits.**

Offered intermittently Prereq., PSYX 100S. Introduction to theories and research in personality. Intensive survey of theoretical concepts and a detailed examination of experimental methods and experiments in the field of personality.

### **PSYX 390 - Advanced Supervised Research. 1-3 Credits.**

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(R-3) Offered every term. Prereq., 12 credits in psychology including PSYX 290 and consent of instr.

### **PSYX 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., nine credits in psychology and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PSYX 392 - Independent Study. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instr.

### **PSYX 398 - Internship. 1-3 Credits.**

(R-3) Offered every term. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **PSYX 400 - History & System in Psychology. 3 Credits.**

Offered intermittently. Prereq., WRIT 101 or equivalent, one intermediate writing course and 15 credits in psychology. Origin and development of basic concepts and methods in scientific psychology. Level: Undergraduate. Con-convenes with PSYX 500.

Gen Ed Attributes: Writing Course-Advanced

### **PSYX 406 - Rural Integrated Behavioral Health Care for Montana. 3 Credits.**

Offered intermittently. Prereq., PSYX 383. This course presents an introduction to models and methods for providing behavioral and mental health services for rural communities in the context of medical Primary Care. It introduces the Patient Centered Medical Home model of primary medical care, provides practical introduction to behavioral health assessment and intervention techniques, and addresses how to make Integrated Behavioral Health training serve rural Montana service needs and workforce development.

### **PSYX 430 - Counseling Theories in Context**

Offered autumn. Prereq., PSYX 100S. This course introduces students to the primary theories that constitute the intellectual foundation for common counseling and psychotherapy techniques, with a special focus on gender, interpersonal influence strategies and diversity issues.

### **PSYX 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., 12 credits in psychology and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **PSYX 494 - Seminar/Workshop. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., nine credits in psychology and consent of instr. Topics of current interest with critical examination of the literature.

### **PSYX 499 - Senior Thesis. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., junior or senior standing and consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication.

## University Of Montana

### **PSYX 500 - Advanced History & Systems in Psychology. 3 Credits.**

Offered intermittently. Prereq., 15 credits in psychology, graduate standing. Origin and development of basic concepts and methods in scientific psychology. Level: Graduate. Con-convenes with PSYX 400.

### **PSYX 501 - Teaching of Psychology. 3 Credits.**

Offered autumn. Prereq., graduate standing in psychology or consent of instr. Exploration and practice of effective teaching techniques. Level: Graduate

### **PSYX 511 - Professional Issues. 1 Credit.**

Offered autumn. Prereq., graduate standing in clinical psychology. Introduction to the professional role and skills in the clinical psychology field. Level: Graduate

### **PSYX 512 - Field Placement-Clinical. 1-12 Credits.**

(R-12) Offered every term. Prereq., graduate standing in psychology and consent of instr. Supervised assessment and intervention experience in applied clinical settings. Level: Graduate

### **PSYX 520 - Advanced Psychological Statistics I. 3 Credits.**

Offered autumn. Prereq., undergraduate statistics, graduate standing in Psychology, or consent of instr. Introduction to descriptive and inferential statistics, probability distributions, null hypothesis significance testing, one and two sample techniques, analysis of variance and the general linear model. Level: Graduate

### **PSYX 521 - Advanced Psychological Statistics II. 4 Credits.**

Offered spring. Prereq., PSYX 520 or consent of instr. Multiple comparisons among means, factorial ANOVA, random effects and mixed models, correlation, simple and multiple regression, analysis of covariance. Level: Graduate

### **PSYX 522 - Multivariate Statistics. 3 Credits.**

Offered autumn. Prereq., PSYX 520 and PSYX 521 and graduate standing in Psychology, or consent of instructor. Introduction to matrix algebra, multivariate analysis of variance, multivariate analysis of covariance, simple slopes in multiple regression, discriminant analysis, canonical correlation, principal components analysis, factor analysis, cluster analysis. Level: Graduate

### **PSYX 523 - Research Design. 3 Credits.**

Offered spring. Prereq., graduate standing in psychology. The examination and application of the principles and methods of experimental and quasi-experimental research design in psychology. Level: Graduate

### **PSYX 524 - Tests & Measurement. 3 Credits.**

Offered autumn. Prereq., graduate standing in psychology or education. Introduction to measurement emphasizing correspondence between research and practice. Provides a theoretical and practical basis for evaluating and using measurement data. Level: Graduate

### **PSYX 525 - Psychological Evaluation I. 3 Credits.**

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Offered autumn. Prereq., undergraduate statistics and graduate standing in clinical or school psychology. Introduction to the study of how psychological processes are supported by biological processes. Mechanisms across levels of analysis, from cells to individuals, are addressed. Individual tests of aptitudes and intellectual abilities; psychometric considerations in clinical assessment; objective personality assessment. Level: Graduate

### **PSYX 526 - Psychological Evaluation II: Objective Approaches and Applications. 3 Credits.**

Offered spring. Prereq., graduate standing in clinical or school psychology. Objective methods in psychological assessment; psychological evaluation techniques in the clinical context. Level: Graduate

### **PSYX 530 - Clinical and Diagnostic Interviewing. 3 Credits.**

Offered autumn. Prereq., graduate standing in clinical psychology, school psychology, or counseling, or consent of instructor. Microcounseling skills development through interactive practice and feedback. Level: Graduate

### **PSYX 531 - Principles of Psychological Intervention. 3 Credits.**

Offered autumn. Prereq., graduate standing in clinical psychology or consent of instructor. The philosophical and scientific bases of major systems of psychotherapy are reviewed. Psychotherapy research methods, issues, and findings are introduced. Level: Graduate

### **PSYX 532 - Advanced Psychopathology. 3 Credits.**

Offered autumn. Prereq., graduate standing in psychology or consent of instr. Symptoms, etiology, diagnostic criteria and treatment of the major psychological disorders, with an emphasis on current research findings. Level: Graduate

### **PSYX 534 - Applied Clinical Methods. 1-4 Credits.**

(R-24) Offered every term. Prereq., graduate standing in the clinical or school program. Theoretical and applied work in a supervised clinical setting. Level: Graduate

### **PSYX 535 - Child Interventions. 3 Credits.**

(R-12) Offered spring. Prereq., graduate standing in the clinical or school psychology program. Review of clinical research and methodology in youth mental health. Specific treatment interventions are explored for the practitioner and also may serve as a valuable base for engaging in psychological consultation with youth and families. Level: Graduate

### **PSYX 536 - Advanced Child and Adolescent Psychopathology. 3 Credits.**

Offered spring. Prereq., graduate standing in psychology or consent of instr. Advanced study of the characteristics, etiology, assessment, and treatment of the emotional, social, and intellectual problems covering the span from infancy through adolescence. DSM and Education Code criteria will be compared. Level: Graduate

### **PSYX 537 - Child Assessment. 3 Credits.**

Offered every other even year autumn semester. Prereq., graduation standing in clinical or school psychology or consent of instructor. Provides an intensive introduction to diagnostic, behavioral, and personality assessment of children and adolescents. Level: Graduate

## University Of Montana

### **PSYX 540 - Advanced Development Psychology. 3 Credits.**

Offered spring. Prereq., undergraduate course in developmental psychology or consent of instr. Psychological and behavioral development through the life span. Level: Graduate

### **PSYX 545 - Field Placement Human Development. 1-6 Credits.**

(R-9) Offered autumn and spring. Prereq., PSYX 540 or equiv. Individualized, applied experience working with and/or observing a particular population of interest, including children, adolescents, or older adults. Involves the completion of an independent project, which may comprise program assessment, research proposal development, etc. Level: Graduate

### **PSYX 550 - Advanced Social Psychology. 3 Credits.**

Offered odd-numbered years spring semester. Prereq., consent of instr. Theory and experiment in the analysis of individual behavior in relation to social stimuli. Level: Graduate

### **PSYX 551 - Advanced Personality. 3 Credits.**

Offered autumn odd-numbered years autumn semester. Prereq., graduate standing in psychology or consent of instr. Theory and research on human personality and behavior. Emphasis on issues and topics of historical and contemporary importance. Level: Graduate

### **PSYX 555 - Advanced Social and Developmental Psychology. 3 Credits.**

Offered spring semester. Prereq., undergraduate course in developmental psychology or consent of instructor. This course provides graduate-level knowledge of the disciplines of Social Psychology and Developmental Psychology. Students will gain knowledge of Social Psychology research and theory relevant to how humans think about, influence, and are influenced by other people, as well as theories and research relevant to the field of Developmental Psychology, including major theories, methodologies, principles, and topics in across the lifespan. Level: Graduate

### **PSYX 560 - Advanced Learning & Cognition. 3 Credits.**

Offered even-numbered years spring semester. Prereq., undergraduate course in perception, cognition, or learning, or consent of instr. A survey of principles, theories, and methods pertaining to how humans and animals learn and represent the world. Level: Graduate

### **PSYX 565 - Advanced Cognition. 3 Credits.**

Offered odd-numbered years spring semester. Prereq., undergraduate course in perception, cognition, or learning, or consent of instr. Examination of the acquisition of knowledge through perception and learning, the retention of knowledge, and the use of knowledge through thinking and reasoning. Level: Graduate

### **PSYX 571 - Advanced Physiological Psychology. 3 Credits.**

Offered even-numbered years autumn semester. Prereq., graduate standing in clinical, school, or experimental psychology or consent of instructor. Brain mechanisms and behavior; electrophysiological correlates of behavior. Level: Graduate

### **PSYX 580 - Professional School Psychology. 3 Credits.**

## University Of Montana

Offered autumn. Prereq., graduate standing in school psychology. The theory, role, and function of school psychology as a profession; includes historical precursors and fit with current systems of psychology. Level: Graduate

### **PSYX 582 - Behavioral Assessment & Intervention. 3 Credits.**

Offered autumn. Prereq., graduate standing in psychology or consent of instr. Covers Schoolwide Positive Behavior Supports in a three-tiered model. Introduces theoretical and practical applications of behavioral assessment and intervention. Students develop skills using behavioral observation, sampling and intervention design/implementation through supervised experience in applied settings. Level: Graduate

### **PSYX 583 - Academic Assessment & Intervention. 3 Credits.**

Offered spring. Prereq., graduate standing in psychology or education. Using the problem-solving model, students develop skills in academic assessment and intervention to make educational decisions. Students develop assessment and intervention design/implementation through supervised experience in applied settings. Level: Graduate

### **PSYX 587 - School Psychology Methods. 3 Credits.**

(R-18) Offered every term. Prereq., graduate standing in school psychology and consent of instr. Applied school psychology work in a supervised setting. Level: Graduate

### **PSYX 588 - School Psychology Internship. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., graduate standing in school psychology program or consent of instr. Supervised work experience in the role and functions of school psychologists. Level: Graduate

### **PSYX 594 - Seminar. 1-12 Credits.**

(R-12) Offered intermittently. A review and discussion of current research. Topics vary. Level: Graduate

### **PSYX 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PSYX 596 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn and spring Prereq., consent of instr. Assigned readings and other special study projects. Level: Graduate

### **PSYX 597 - Research. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Independent supervised research projects, other than thesis or dissertation. Level: Graduate

### **PSYX 599 - Thesis/Research Project. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. M.A. thesis or M.A. Research project Level: Graduate

### **PSYX 604 - Psychological Intervention in Rural Integrated Behavioral Health. 3 Credits.**

## University Of Montana

Offered intermittently. Prereq., graduate students in Clinical and School Psychology, Social Work, Counselor Education, and to local partners. This course presents an overview of and experience with the future of mental and behavioral health care delivery. It describes and discusses Integrated Behavioral Health (IBH) in Primary Care; introduces the Patient Centered Medical Home model of primary care; provides practical introduction to a variety of behavioral health approaches & techniques; and, it addresses explicitly how to make IBH training relevant to rural Montana and Montana workforce needs -- all through a mix of classroom and ?lab? experiences.

### **PSYX 625 - Clinical Assessment. 3 Credits.**

Offered autumn. Prereq., advanced graduate standing in clinical psychology program and consent of instructor. Students will conduct a variety of clinical assessments, including personality and neuropsychological testing. Students will gain experience with all phases of clinical assessment (e.g., interviewing, test administration, report writing, etc.) Level: Graduate

### **PSYX 630 - Ethics, Professional & Cultural Issues. 3 Credits.**

Offered spring. Occasionally shifted to autumn. Prereq., enrollment in doctoral program in clinical, experimental, or school psychology. Review of ethical principles and professional standards of psychologists. Analysis of the influence of cultural factors upon professional conduct. Level: Graduate

### **PSYX 631 - Intervention. 3 Credits.**

(R-12) Offered every term. Prereq., graduate standing in the clinical or school psychology programs and consent of instr. Review of clinical research and methodology. Specific treatment interventions are explored for the practitioner and also may serve as a valuable base for engaging in psychological consultation. Each offering will have a unique title. Level: Graduate

### **PSYX 632 - Current Clinical Topics. 3 Credits.**

(R-12) Offered intermittently. Prereq., graduate standing in psychology and consent of instr. Current topics in clinical psychology with reviews of theory, research, and methodology. Each offering will have a unique title. Level: Graduate

### **PSYX 634 - Advanced Applications of Clinical Methods. 1-4 Credits.**

(R-6) Offered every term. Prereq., PSYX 534 and consent of instr. Advanced clinical work in a supervised setting. Level: Graduate

### **PSYX 638 - Clinical Psychology Internship. 1-3 Credits.**

(R-6) Offered every term. Prereq., proficiency in clinical techniques. Clinical internship offered by the psychology staff of a hospital, clinic or other approved agency in coordination with The University of Montana Clinical Psychology Program. Level: Graduate

### **PSYX 680 - Consultation and Supervision. 3-4 Credits.**

Offered spring even-numbered years. Prereq., graduate standing in school psychology. Theoretical background and case conceptualization in academic and behavioral consultation and supervision and how this can be applied in school-based settings. Level: Graduate

### **PSYX 694 - Seminar. 1-12 Credits.**



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(R-12) Offered intermittently. A review and discussion of current research. Topics vary. Level: Graduate

**PSYX 697 - Advanced Research. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., consent of instr. Independent research projects, other than thesis or dissertation. Level: Graduate

**PSYX 699 - Dissertation. 1-18 Credits.**

(R-18) Offered every term. Prereq., consent of instr. Doctoral dissertation research activities. Level: Graduate

## Public Administration (PUAD)

### **PUAD 413 - Nonprofit Financial Management. 2 Credits.**

This course explores special issues related to nonprofit financials including accounting basics, budgeting, financial statement ratios, management controls and nonprofit income tax reporting processes.

### **PUAD 501 - Public Administration. 3 Credits.**

Req., Department of Public Administration and Policy majors. Advanced analysis of processes of public management; examination of public administrators' involvement in policy making. Level: Graduate

### **PUAD 503 - Policy Analysis. 3 Credits.**

Req., Department of Public Administration and Policy majors. The role of public administrators in the policymaking process with emphasis on methods of policy analysis and program evaluation. Level: Graduate

### **PUAD 504 - Organization Theory. 3 Credits.**

Offered intermittently. Req., Department of Public Administration and Policy majors. Concepts and theories relevant to the administration of complex organizations, including administrative structure, behavior, process and functions. Level: Graduate

### **PUAD 505 - Budgeting & Finance. 3 Credits.**

Offered intermittently. Req., Department of Public Administration and Policy majors. Seminar focusing on principles of public finance and analysis of budgeting as a primary tool of public sector management. Level: Graduate

### **PUAD 506 - MPA Applied Research Methods. 3 Credits.**

Req., Department of Public Administration and Policy majors.

### **PUAD 507 - Program Evaluation. 3 Credits.**

Req., Department of Public Administration and Policy majors.

### **PUAD 522 - Human Resource Management. 3 Credits.**

Offered intermittently. Req., Department of Public Administration and Policy majors. Study of the essential elements of human resource management, including analysis and evaluation of work, and the selection, management, and evaluation of public employees. Level: Graduate

### **PUAD 523 - Administrative Law. 3 Credits.**

Offered intermittently. The legal foundations of public administration with emphasis on legislative delegation, administrative rulemaking and adjudication, judicial review, and public participation. Level: Graduate

### **PUAD 525 - Strategic Planning. 3 Credits.**

Offered intermittently. Focus on the means by which public and nonprofit agencies can carry out their missions effectively. Level: Graduate

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### **PUAD 526 - Issues in State Government. 3 Credits.**

Offered intermittently. Examination of the evolution and development of state governments since the founding period by focusing on the basic political institutions and a broad range of public policy issues that affect governing in the states. Level: Graduate

### **PUAD 527 - Performance Measurement. 3 Credits.**

Offered intermittently. Focus on the process by which organizations routinely and systematically gather data to assess progress in achieving their goals. Level: Graduate

### **PUAD 528 - Women, Policy, & Public Administration. 3 Credits.**

Offered every other year as an elective for the Master of Public Administration Program. Level: Graduate

### **PUAD 529 - Introduction to Nonprofit Organizations. 3 Credits.**

Offered intermittently. This course is one of the core courses required for MPA students completing the Nonprofit Administration Track. The course provides an introduction to nonprofit organizations and the nonprofit sector within which they are embedded. It investigates such topics as the nature of the nonprofit sector, the diverse kinds of nonprofits in existence, the phenomenon of charitable giving, philanthropy, and volunteering, and the legal framework that establishes nonprofit organizations and regulates their activities. This course is appropriate for graduate students from many disciplines in addition to MPA students due to the diverse nature of the nonprofit sector in fields such as environmental studies, communication studies, sociology, social work and law. Level: Graduate

### **PUAD 531 - Introduction to Public Policy. 3 Credits.**

This course will rotate annually as an online and in person course offering for the Master of Public Administration's public policy certificate. Level: Graduate

### **PUAD 547 - Legislation. 3 Credits.**

Offered intermittently. Focuses on the methods and issues involved in establishing effective working relationships between agencies and the legislative process. Level: Graduate

### **PUAD 561 - Ethics in Public Administration. 3 Credits.**

Offered intermittently. Prereq., Graduate student and Department of Public Administration and Policy majors.. Online course offered every other year. Explores the role of ethics and integrity in public administration and the moral obligations of citizenship. Level: Graduate

### **PUAD 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **PUAD 596 - Independent Study. 1-6 Credits.**

(R-12) Offered every term. Prereq., consent of instr and Department of Public Administration and Policy majors. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **PUAD 598 - Internship. 1 to 6 Credits.**

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(R-6) Offered every term. Prereq., consent of instr. and Department of Public Administration and Policy majors. Offered credit/no credit only. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

## Public Health (PUBH)

### **PUBH 101S - Introduction to Public Health. 3 Credits.**

This course will serve as an overview of the discipline and practice of public health. This will include the history of public health, tools and techniques used in the field, a population perspective, and an emphasis on prevention. General principles of public health are illustrated through textbook readings, contemporary articles, videos, case studies as well as field trips to local organizations.

Gen Ed Attributes: Social Sciences Course (S)

### **PUBH 155 - Reimagining Global Health. 3 Credits.**

Examination of global health problems in the context of rapidly changing social structures, cultural beliefs and practices, and environmental and biological realities that transcend geopolitical boundaries. Students will explore case studies and a multidisciplinary research literature centering on how biosocial perspectives might provide a foundation to improve health and well-being on a global level.

### **PUBH 225 - Public Health Policy. 3 Credits.**

This course introduces concepts of health policy at the global, national, state and local level, and reviews current and emerging issues in health policy. Special emphasis will be on international health. The international emphasis will be on the public health problems facing low- and middle-income countries today, especially those problems relating to reproductive health, infectious diseases, nutrition, and literacy. We will also examine the interaction of health policy and law, and issues of international cooperation and global governance.

### **PUBH 230 - Public Health Biology. 3 Credits.**

This course provides a foundation of biology concepts necessary for the practice of public health including an evaluation of the natural history and mechanisms underlying infectious and chronic human diseases.

### **PUBH 325 - Environmental and Occupational Health. 3 Credits.**

Prereq., PUBH 101S. This course presents information related to the recognition, evaluation and control of the chemical, physical and environmental factors that can impact human health in the workplace and the community.

### **PUBH 330 - Public Health Informatics. 3 Credits.**

Prereq., PUBH 101S. The purpose of this course is to provide the student an overview of the subject of Public Health Informatics. The historical development of public health information management to current developments and issues in public health informatics will be addressed. Current technical concerns, strategies and needs will be studied. Current and historical case studies will be reviewed and analyzed to give the student a deeper appreciation for the field.

### **PUBH 345 - Healthcare Systems and Organizations. 3 Credits.**

Prereq., PUBH 101S. This course provides an overview of how healthcare and public health are organized and how their services are delivered in the United States. Topics to be covered include public policy (including U.S. health reform initiatives); organization of healthcare systems; components and operation of healthcare

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organizations, including e-health delivery; professional roles and accreditation; and legal and regulatory issues, including licensure requirements. The course will also introduce healthcare systems in other countries to serve as a comparison for the U.S. healthcare system.

### **PUBH 365 - Population Health Practices. 3 Credits.**

Prereq., PUBH 101S. This course provides an orientation to the U.S. public health system and major contemporary public health problems using evidence-based approaches. Students will apply the principles of evidence-based approaches in critical assessment of public health issues from program design and implementation to evaluation and assessment. This course will emphasize the principles of scientific reasoning and how they inform evidence-based public health interventions. Students will be able to examine public health issues from multiple analytic perspectives and recognize how these perspectives may suggest different solutions to a given public health problem.

### **PUBH 380 - Public Health Nutrition. 3 Credits.**

Prereq., junior standing or consent of instructor. Student strongly encouraged to have completed NUTR 221N, or comparable course, before enrolling. This course will examine the role of nutrition in promoting, maintaining and improving health in the community. The course will investigate traditional aspects of the emerging health delivery system, as the financial, legislative, political sociological and scientific aspects of public and community health. Students will identify nutrition programs and policies for various stages of the life cycle and develop skills needed to solve nutrition and health problems in community settings.

### **PUBH 410 - Population Health Planning. 3 Credits.**

Prereq., PUBH 101S. The course is designed to provide students an overview to develop culturally competent public health programs to address the most important health issues affecting our communities at local, national, and international levels. Students will learn the process of public health programming including assessment, design, planning, and implementations and evaluation. The course will also include an overview of effective public health interventions using the socio-ecologic framework (individual/behavioral, environmental/social/community and policy) as a foundation to explore various levels of interventions.

### **PUBH 415 - Role of Lifestyle in Chronic Disease Prevention. 3 Credits.**

Prereq., acceptance in the Health Behavior Coach Certificate or consent of instructor. As a Health Behavior Coach knowledge of chronic disease prevention is of utmost importance. In this course coaches will be learn about the art and science of health promotion and disease prevention; including an understanding of risk factors for chronic disease, basic biometric measures, and current lifestyle recommendations for optimizing health.

### **PUBH 420 - Health Coach Training. 3 Credits.**

Prereq., acceptance in the Health Behavior Coach Certificate or consent of instructor. The purpose of this course is to introduce students enrolled in the Health Behavior Coach Certificate program to the core competencies set out by the National Consortium for Credentialing of Health & Wellness Coaches (NCCWC). Instruction includes an overview of behavior change science and research in the area of effective lifestyle change, as well as practice in the application of the NCCWC competencies.

### **PUBH 475E - Public Health Ethics. 3 Credits.**

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This course is will explore a variety of theories, concepts, issues, cases, and arguments in both medical and public health ethics, including the overlap and distinctions between these two related areas. Level: Undergraduate-Graduate

### **PUBH 494 - Seminar. 1-6 Credits.**

(R-6) A review and discussion of current research. Topics vary. Level: Undergraduate-Graduate

### **PUBH 495 - Practicum. 1-6 Credits.**

(R-6) Level: Undergraduate-Graduate

### **PUBH 498 - Internship. 1-6 Credits.**

(R-6) Prereq. all PH concentrations minimum junior standing. Suggested for Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 14 credits their internship semester.

### **PUBH 499 - Capstone. 1-3 Credits.**

(R 6) Prereq., Consent of instructor

### **PUBH 510 - Intro to Epidemiology. 3 Credits.**

Offered spring. Open to PUBH majors only. Principles and methods of epidemiologic investigation, descriptive and analytic epidemiology techniques, disease frequency, risk determination, study designs, causality, and validity. Level: Graduate

### **PUBH 511 - History & Theory Epidemiology. 3 Credits.**

Offered autumn. Open to PUBH majors only. This graduate course covers the basic science of public health. Major schools of epidemiology from the Greek, Italian and English traditions will be compared and contrasted Basic concepts and terminology will be introduced and major pandemics used to illustrate the evolution of the field. Level: Graduate

### **PUBH 515 - Public Health Genetics. 3 Credits.**

Offered autumn. Open to PUBH majors only. Basic principles of genetics and genomics, application to public health practices and research. Includes issues in public health genetics such as informed consent, screening for genetic susceptibility, and ethical, legal and social implications. Level: Graduate

### **PUBH 520 - Fundamentals of Biostatistics. 3 Credits.**

Offered autumn. Open to PUBH majors only. This course is designed for graduate students and practitioners in public health, biomedical sciences, and related fields. The course introduces basic vocabulary, concepts, and methods of biostatistics. The goal is to provide an introduction to how biostatistics works. Topics will include descriptive statistics, probability, random variables, probability distributions, statistical inference, chi-square analysis, linear regression, and correlation. Level: Graduate

### **PUBH 525 - Multicultural/Native American Public Health. 3 Credits.**

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Offered Autumn. Open to PUBH majors only. This course is designed to provide general overview of multicultural issues within the United States and specifically within Montana. The course will provide overview information about health disparities within the nation and how these disparities disproportionately impact ethnic minority populations. Montana's largest minority population is native American tribal communities. As a result, much of the course will incorporate advanced knowledge and topics relating to regional health disparities facing Native American communities. Level: Graduate

### **PUBH 530 - Public Health Administration and Management. 3 Credits.**

Offered autumn. Open to PUBH majors only. Overview of public health and health care systems; organizational structures, functions, authorities, policies and procedures; programmatic budgeting, operations, and prioritizations; program performance reporting and improvement; grants and contracts; informatics; human relations and negotiation; management and leadership; and business planning. Level: Graduate

### **PUBH 531 - Leadership in Public Health. 3 Credits.**

Offered spring. Open to PUBH majors only. Prereq., PUBH 530 or consent of instr. This course deepens the students knowledge and understanding of the role of public health leaders in the community whether in forming partnerships between public health agencies or with private entities. This course begins by building an understanding of the principles of leadership, explores the applications of leadership to public health, develops the relationship between leadership skills and competencies, studies the role of leadership in evaluation and research and concludes with a look at public health now versus how it could be in the future. Level: Graduate

### **PUBH 535 - Health Policy. 3 Credits.**

Offered autumn and spring. Open to PUBH majors only. The evolution and intersection of international, federal, state, and local public health policy. Level: Graduate

### **PUBH 540 - Social & Behavioral Science in Public Health. 3 Credits.**

Offered autumn. Open to PUBH majors only. Behavioral and social factors relevant to the identification and solution of public health problems, principles of health behavior change, applications, and assessment of interventions. Level: Graduate

### **PUBH 545 - Issues in Maternal and Child Health. 3 Credits.**

This course provides an overview of maternal and child health problems, programs, and policies. The course examines the social determinants of health and development of women, infants, children and adolescents using the life-course perspective. Students will become familiar with the epidemiology of maternal and childhood diseases and assess the resources and interventions used to combat them. 16 maximum enrollment. Offered online only. Level: Graduate

### **PUBH 548 - Issues in Mental & Child Health. 3 Credits.**

Offered Summer. Prereq., Public Health majors. This course provides an overview of maternal and child health problems, programs, and policies. Using the life-course perspective, this course examines the social determinants of health and development of women, infants, children and adolescents. Students will become familiar with the epidemiology of maternal and childhood diseases and assess the resources and interventions used to combat them. Level: Graduate.



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### **PUBH 550 - Program Evaluation & Research Methods. 3 Credits.**

Offered every odd summer. Open to PUBH majors only. Prereq., PUBH 510 or equiv. and consent of instr. Covers purpose statements, standards, study designs, sampling, measurement, methods for data collection and analysis, interpretation, and report preparation. Models of evaluation described, and similarities and differences between research and evaluation methods explored. Level: Graduate

### **PUBH 560 - Environmental & Rural Health. 3 Credits.**

Offered spring. Open to PUBH majors only. Relationship of people to their physical environment, how this relationship impacts health, and efforts to minimize negative health effects. Level: Graduate

### **PUBH 570 - Ethical Issues in Public Health. 3 Credits.**

Offered summer. Open to PUBH majors only. Focus on the values and moral issues that underlie U.S. public health policies. Course examines ethical decision making in areas such as policy development, research, environmental health, occupational health, resource allocation, and genetics. Level: Graduate

### **PUBH 580 - Rural Health Issues Global Context. 3 Credits.**

Offered summer. Open to PUBH majors only. Focus on rural concerns and global influences on public health. Covers trends in global health, global health policies, players, priorities, human rights, health equity, and mobile and vulnerable populations. Students will be introduced to health research methods and design, which will be used to analyze rural and global health issues. Emphasize the science and art of epidemiological strategies to answer specific health questions. Level: Graduate

### **PUBH 590 - Research. 3 Credits.**

(R-6) Offered autumn and spring. Open to PUBH majors only. Prereq., admission to the M.P.H. program and consent of instructor. With the guidance of their faculty advisor, students will develop a written proposal specific to the goals of their research project, and carry out the project. Level: Graduate

### **PUBH 591 - Special Topics/Experimental. 3 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Previous topics have included Global Health and Epidemiology of Infectious Disease. Level: Graduate

### **PUBH 592 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Open to PUBH majors only. Prereq., admission to the M.P.H., program and consent of instructor. Supervised readings, research, or public health practice. Level: Graduate

### **PUBH 594 - Professional Paper. 3 Credits.**

Offered autumn and spring. Open to PUBH majors only. Prereq., consent of instructor. Students will demonstrate synthesis and integration of public health knowledge in the foundational and concentration-specific public health competencies through the development of a high-quality written product that is appropriate for the student's educational and professional objectives. The ILE should be completed after the student has at least 12 credits in the degree program. Offered credit/no credit only. Level: Graduate

### **PUBH 595 - Practicum. 3 Credits.**

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Offered autumn and spring. Open to PUBH majors only. Prereq., consent of instructor. Students will demonstrate attainment of public health competencies through a practice-based experience. The final product of the APE is a portfolio that includes at least two distinct products (such as videos, multi-media presentations, journal entries, spreadsheets, websites, posters, photos or other digital artifacts of learning) as well as an oral presentation. Students must have completed 12 credits of core courses prior to enrolling for the APE. Offered credit/no credit only. Level: Graduate

### **PUBH 600 - Research Rotations in Public Health. 3 Credits.**

Offered autumn and spring. Prereq., open to PUBH majors only. This course will provide students with experience related to different types of public health research projects being conducted not only within the School of Public and Community Health Sciences, but throughout the University of Montana. Level: Graduate

### **PUBH 612 - Neuroepidemiology. 3 Credits.**

Offered every even spring. Prereq., PUBH 510 or equiv. Students will learn about special considerations researchers incorporate into studying neurological diseases. Course materials will include a presentation of the pathophysiology, clinical aspects and descriptive epidemiology of a variety of neurologic diseases. Particular emphasis will be placed on the methodologic challenges and strategies associated with the study of these diseases. Level: Graduate

### **PUBH 613 - Spatial Epidemiology in Geographic Information Systems (GIS). 3 Credits.**

Offered every odd spring. Prereq., PUBH 510 or equiv. Spatial epidemiology is the study of the spatial distribution of disease that encompasses both the description and analysis of geographic variations in disease with respect to any number of risk factors. Spatial Epidemiology in Geographic Information Systems (GIS) is a unique course designed for teaching GIS techniques to students interested in public health, epidemiology, and infectious disease. It imbeds learning GIS software in the context of human health scenarios including wildlife (zoonotic) hosts and arthropod vectors. Students will gain basic skills in analyzing datasets and performing spatial and neighborhood analyses on data. Level: Graduate

### **PUBH 614 - Environmental and Occupational Epidemiology. 3 Credits.**

Offered every odd spring. Prereq., PUBH 510 or equiv. Through readings, case studies, and class discussions, students will gain the ability to critically evaluate published research in environmental and occupational epidemiology that will provide the background for students to design and conduct their own research. A particular emphasis will be on published research relevant to rural communities to illustrate concepts; however, we also will draw from examples from around the world relating to a wide variety of exposures. Level: Graduate

### **PUBH 620 - Advanced Quantitative Methods in Public Health I. 3 Credits.**

Offered autumn. Prereq., PUBH 510 and PUBH 520 or equiv. Through lectures and collaborative problem sets, students will gain the expertise to design and conduct their own research. The emphasis will be on concepts related to basic and advanced epidemiologic methods and on how these concepts influence study design choices. We will utilize R and STATA statistical software throughout the course to illustrate concepts using simple datasets. Level: Graduate

### **PUBH 621 - Advanced Quantitative Methods in Public Health II. 3 Credits.**

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Offered spring. Prereq., PUBH 620. This is the second in the Advanced Quantitative Methods series in public health. This semester will focus on practical data analysis and the presentation and translation of findings in both manuscript and oral form. We will analyze a complex, longitudinal dataset to illustrate the concepts learned in the first semester. The course will culminate in the analysis of a new longitudinal dataset and the presentation of your results. Level: Graduate

### **PUBH 640 - Qualitative Research Methods in Public Health. 3 Credits.**

Offered every odd spring. Prereq., PUBH 540 or equiv. The course provides an overview of qualitative research methods commonly used in public health research. Students will develop expertise in designing and conducting: focus groups, interviews, conversation analysis, and analyses of digital data sources. The major deliverables in this class include developing a presentation on one of the qualitative research approaches, designing and implementing a qualitative research project, and writing a manuscript that summarizes the qualitative research project. Level: Graduate

### **PUBH 690 - Research. 1-9 Credits.**

(R-27) With the guidance of their faculty advisor, students will develop a written proposal specific to the goals of their research project, and carry out the project.

### **PUBH 691 - Special Topics. 1-6 Credits.**

Students will learn about special considerations researchers incorporate into studying neurological diseases. Course materials will include a presentation of the pathophysiology, clinical aspects and descriptive epidemiology of a variety of neurologic diseases. Particular emphasis will be placed on the methodologic challenges and strategies associated with the study of these diseases.

### **PUBH 692 - Independent Study. 1-6 Credits.**

Supervised readings, research, or public health practice.

### **PUBH 694 - Seminar. 1-3 Credits.**

(R-9) Students discuss experiences with goal of integrating theory and practice.

### **PUBH 699 - Dissertation. 1-9 Credits.**

(R-50) Offered every semester. The dissertation is an original contribution to knowledge of such substance and literary quality as to warrant publication. A dissertation research proposal that is approved by the student's PhD Advisory Committee must be completed before registering for Dissertation Research credit. Level: Graduate

## Radiologic Technology (AHXR)

### **AHXR 101 - Patient Care in Radiology. 2 Credits.**

Offered autumn. Offered at Missoula College. All program pre-requisites must be completed, and student must be accepted into the program. Introduction to the concepts and practices necessary to provide quality patient care in the diagnostic imaging department. Course covers legal and ethical standards of care, basic nursing practices, infection control, venipuncture, and etc, as well as medications and contrast agents used in radiology.

### **AHXR 121 - Radiographic Imaging I. 4 Credits.**

Offered autumn. Offered at Missoula College. All program pre-requisites must be completed, and student must be accepted into the program. Introduction to physics of x-ray production. Includes factors of image quality and exposure methods: density, contrast, recorded detail, distortion.

### **AHXR 140 - Radiographic Methods. 4 Credits.**

Offered autumn. Offered at Missoula College. All program pre-requisites must be completed, and student must be accepted into the program. Knowledge and skills necessary for quality patient care during standard and specialty radiographic procedures.

### **AHXR 141 - Radiology Lab. 1 Credit.**

Offered at Missoula College. All program pre-requisites must be completed, and student must be accepted into the program. Students will practice all patient positioning skills necessary for competency as Radiologic Technologists.

### **AHXR 160 - Radiographic Methods II. 3 Credits.**

Offered spring. Offered at Missoula College. Advanced and less common radiographic procedures are introduced including fluoroscopy, surgery and various other procedures

### **AHXR 161 - Radiographic Methods II Lab. 1 Credit.**

Offered spring. Offered at Missoula College. Students will practice patient positioning skills necessary for competency as Radiologic Technologists.

### **AHXR 192 - Independent Study. 1-6 Credits.**

Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **AHXR 195 - Radiographic Clinical: I - II. 1-12 Credits.**

(R-20) Offered over two semesters throughout the Radiology Technology program, beginning autumn semester. Offered at Missoula College. Students will begin with an introduction to patient management and basic radiographic procedures. The final semester offers opportunities in advanced patient management skills and experience with highly skilled radiographic procedures. Each semester builds on the previous semester, always emphasizing the principles of ALARA.

### **AHXR 221 - Radiographic Imaging II. 2 Credits.**

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Offered spring. Offered at Missoula College. Offers students more technical and detailed information on the use of image receptor systems, processing principles, advanced digital imaging systems and imaging modalities used in radiology.

### **AHXR 225 - Radiobiology/Radiation Protctn. 2 Credits.**

Offered spring. Offered at Missoula College. Principles of radiation protection and radiobiology. Topics include the effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel, and radiation monitoring devices.

### **AHXR 270 - Radiographic Registry Review. 2 Credits.**

Offered autumn. Offered at Missoula College. An overview of imaging concepts as a review for the national certification test. Topics include a systematic approach for image evaluation, patient care, radiation protection and the physics of radiographic imaging.

### **AHXR 274 - Cross Sectional Anatomy. 3 Credits.**

Course offered online spring semester. Offered at Missoula College. Students must be program graduates or ARRT certified with a current state license to register for the CT courses. This course will cover sectional anatomy (axial, sagittal and coronal planes), contrast media (types, contraindications, administration), imaging processes (scout acquisition and methods, parameter selection, protocol modification), and special procedures (reformatting, 3-D rendering, biopsies/drains, screening).

### **AHXR 275 - Physics and Instrumentation. 2 Credits.**

Course offered online spring semester. Offered at Missoula College. Students must be program graduates or ARRT certified with a current state license to register for the CT courses. This course will cover information specific to ARRT guidelines in preparation for the Computed Tomography Exam. The course will be broken down in to the following sections: patient assessment and preparation, contrast administration, radiation safety, and dosimetry.

### **AHXR 291 - Special Topics. 1-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHXR 295 - Radiographic Clinical: III - IV. 8-24 Credits.**

(R-22) Offered over two semesters throughout the Radiology Technology program, beginning summer semester. Offered at Missoula College. Students will begin with an introduction to patient management and basic radiographic procedures. The final semester offers opportunities in advanced patient management skills and experience with highly skilled radiographic procedures. Each semester builds on the previous semester, always emphasizing the principles of ALARA.

### **AHXR 298 - Internship. 1 Credit.**

Offered at Missoula College. Extended classroom experience which provides practical application of classroom learning during placements off campus.

## Religious Studies (RLST)

### **RLST 104 - Introduction to the Bible. 3 Credits.**

This course offers an introduction to the modern study of the Bible, including both the Hebrew Bible (Old Testament) and the New Testament. It assumes no prior knowledge of religion, the Bible, Judaism or Christianity. The goal of the course is to understand the Bible's literary structures and themes and its ancient historical contexts. It will approach the Bible from comparative, historical, literary, anthropological and archeological perspectives to illuminate the world of its authors.

### **RLST 191 - Special Topics. 1-9 Credits.**

(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **RLST 198 - Internship. 1-6 Credits.**

(R-6) Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **RLST 202X - Hindu Traditions. 3 Credits.**

Critical exploration of selected aspects of Hindu thought, narrative and practice, both in contemporary and historical perspective. Focus primarily on India, but with consideration of Hinduism's transformation and impact beyond South Asia.

### **RLST 204 - Intro to the Hebrew Bible. 3 Credits.**

An introduction to the history, religion, and literature of ancient Israel and to modern methods in Hebrew Bible (Old Testament) studies. Includes an introduction to the history and religions of ancient West Asia.

### **RLST 232 - Buddhism. 3 Credits.**

A historical introduction to the development of Buddhist thought and practice in the cultures of Asia and the West.

### **RLST 238H - Japanese Religions. 3 Credits.**

Offered at least once every two years. An introductory exploration of Japan's unique religious synthesis of Buddhist, Shinto, Taoist, Confucian and folk/shamanistic traditions.

Gen Ed Attributes: Historical Studies

### **RLST 281E - Comparative Ethics. 3 Credits.**

An examination of central theological teachings and modes of ethical reasoning of major religious traditions with models from the East and West.

Gen Ed Attributes: Ethical & Human Values Course

### **RLST 291 - Special Topics. 1-9 Credits.**

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(R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **RLST 292 - Independent Study. 1-6 Credits.**

(R-6) Course material appropriate to the needs and objectives of the individual student.

### **RLST 300 - Theory & Method Study of Relig. 3 Credits.**

A survey of modern theories and methods in the study of religion. Overview of sociological, anthropological, psychological, phenomenological, comparative, cognitive, and other approaches to the question, What is religion?

### **RLST 310 - Topics in Biblical Studies. 3 Credits.**

(R-6) Selected topics in modern Hebrew Bible (Old Testament) and New Testament studies. Focus on history, literature, and religions of ancient West Asia, the Mediterranean and North Africa. Topics vary from year to year and include: Israelite religion; prophets and prophecy; biblical history and historiography; ancient Gospels; the letters and communities of Paul; early biblical interpretation; archaeology and iconography of ancient religions; religion and politics in the Bible.

### **RLST 320 - Ancient Judaism & Early Christianity. 3 Credits.**

(R6) Survey of the history and literature of ancient Judaism and early Christianity. Topics include: the emergence of Judaism and Christianity in the Persian, Greek, and Roman empires; religions of ancient West Asia and the Mediterranean; stories of Jewish and Christian origins; the historical Jesus; the early rabbinic movement; the Dead Sea Scrolls; Paul between Judaism and Christianity.

### **RLST 335 - Western Religious Thought I. 3 Credits.**

Selected studies in the intellectual history of western religions, alternating between studies of periods and seminal thinkers. Emphasis will be on the ancient and medieval periods.

### **RLST 336 - Western Religious Thought II. 3 Credits.**

Selected studies in the intellectual history of western religions, alternating between studies of periods and seminal thinkers. Emphasis will be on the late medieval and early modern periods.

### **RLST 353 - Topics in South Asia Religions. 3 Credits.**

(R-6) This course will examine select topics of central importance with respect to the history of interaction between the major religions (Hinduism, Islam, Buddhism, Jainism, Sikhism) of South Asia.

### **RLST 354 - Topics in East Asia Religions. 3 Credits.**

(R-6) This course will examine select topics of central importance with respect to the history of interaction between the major religions (Confucianism, Taoism, Buddhism, and folk animism and shamanism) of East Asia.

### **RLST 366 - Tibetan Civilization. 3 Credits.**

An exploration of the history and culture of a unique civilization that has influenced greatly the cultures of Himalayan, East, and South Asia. Special attention will be given to Tibetan religions, but these will be explored within the context of the society's political, social, economic, and other cultural developments.

**RLST 368 - Contemporary Buddhism in S/SEAsia. 3 Credits.**

As with other major religions, modernity and globalization have presented profound challenges to Buddhist traditions. In this course we will explore various contemporary issues that have affected Theravada Buddhist societies--colonial and post-colonial revivalism, religious nationalism, women's rights and social reform--as case studies in some of the major ways in which religions have confronted modernity.

**RLST 369 - Contemplative Traditions of Asia. 3 Credits.**

An exploration of the rich and diverse approaches to mental transformation and cultivation of gnosis as developed by several of Asia's major religious traditions, such as Buddhism, Jainism, Hinduism, Taoism, and Confucianism.

**RLST 370 - Mysticism. 3 Credits.**

(R-6) An inquiry into the literature and interpretation of mysticism in the major religious traditions. Each offering will focus on a specific tradition or period.

**RLST 376 - Contemporary Religious Thought. 3 Credits.**

(R-6) Study of selected major critical and constructive proposals in modern religious thought in various traditions.

**RLST 391 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

**RLST 392 - Independent Study. 1-6 Credits.**

(R-6) Course material appropriate to the needs and objectives of the individual student.

**RLST 491 - Special Topics. 1-12 Credits.**

(R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

**RLST 492 - Independent Study. 1-9 Credits.**

(R-9) Prereq., consent of instr. Work on selected problems by individual students under direct faculty supervision.



## Russian (RUSS)

### **RUSS 101 - Elementary Russian I. 4 Credits.**

Offered autumn. Emphasis on oral communication, with development in all major skill areas: listening, speaking, reading, and writing.

### **RUSS 102 - Elementary Russian II. 4 Credits.**

Offered spring. Prereq., RUSS 101 or equiv. Continuation of 101.

Gen Ed Attributes: Foreign Language Requirement

### **RUSS 105Y - Intro to Russian Culture. 3 Credits.**

Offered autumn. A chronological survey of Russian culture from its beginnings to the contemporary period.

Gen Ed Attributes: Democracy and Citizenship (Y), Cultural Intl Diversity (X)

### **RUSS 191 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **RUSS 192 - Independent Study. 1-6 Credits.**

(R?6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **RUSS 193 - Study Tours / Study abroad. 1-12 Credits.**

(R-10) Offered intermittently. University omnibus option for independent work.

### **RUSS 201 - Intermediate Russian I. 4 Credits.**

Offered autumn. Prereq., RUSS 102 or equiv. Continuation of active skills approach to Russian listening, speaking, reading, and writing.

Gen Ed Attributes: Foreign Language Requirement

### **RUSS 202 - Intermediate Russian II. 4 Credits.**

Offered spring. Prereq., RUSS 201. Continuation of 201. Continuation of active skills approach to Russian listening, speaking, reading, and writing.

Gen Ed Attributes: Foreign Language Requirement

### **RUSS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **RUSS 293 - Study Tours / Study abroad. 1-12 Credits.**

(R-10) Offered intermittently. University omnibus option for independent work.

## University Of Montana

### **RUSS 301 - Russian: Oral & Written Expression I. 3 Credits.**

Offered autumn. Prereq., RUSS 202 or consent of instr. Emphasis on active use of Russian. Intensive practice in conversation and writing.

Gen Ed Attributes: Foreign Language Requirement

### **RUSS 302 - Russian: Oral and Written Expression II. 3 Credits.**

Prereq., RUSS 301 or consent of instr. A continued emphasis on active use of Russian. Intensive practice in conversation and writing. Continuation of 301.

Gen Ed Attributes: Foreign Language Requirement

### **RUSS 306L - Evil and the Supernatural in Russian Literature. 3 Credits.**

Offered alternate years. A survey of 19th- and 20th century Russian literature in translation. This course will focus on texts exploring evil and the supernatural. May include the works of Pushkin, Gogol, Dostoevsky, Tolstoy, Chekhov, Bulgakov and others. No knowledge of Russian is necessary.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **RUSS 307L - Beauty, Power and Pride in Russian Literature. 3 Credits.**

Offered alternate years. Survey of Russian literature up to the present day. Texts focus on the themes of beauty, power and pride as a lens for exploring elements of Russian identity.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **RUSS 371 - SRAS: The New Great Game. 3 Credits.**

Offered every term. Prereq., consent of instructor. Restricted to students in the SRAS program. Taught at The London School in Bishkek, Kyrgyzstan. This course offers an overview of the New Great Game as a renewed struggle for hegemony and control over natural resources in Central Asia between competing global powers, the Central Asian republics themselves, and neighboring states.

### **RUSS 372 - SRAS: Understanding Central Asia. 3 Credits.**

Offered every term. Prereq., consent of instructor. Restricted to students in the SRAS program. Taught at The London School in Bishkek, Kyrgyzstan. The course offers a broad overview of the cultural and social, as well as the historical and religious, dimensions of Central Asia, including Kyrgyzstan, Kazakhstan, Uzbekistan, Turkmenistan, and Tajikistan, in addition to Afghanistan and Xinjiang because of their influential role in greater Eurasia.

### **RUSS 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **RUSS 392 - Independent Study. 1-6 Credits.**

(R-12) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **RUSS 393 - Study tours / Study abroad. 1-12 Credits.**

## University Of Montana

Offered intermittently. University omnibus option for independent work.

### **RUSS 398 - Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **RUSS 411 - 19th-Century Russian Authors. 3 Credits.**

Offered intermittently. Prereq., RUSS 202 or consent of instructor. A study of various authors; may include Pushkin, Dostoevsky, Tolstoy, etc.

### **RUSS 412 - 20th-Century Russian Authors. 3 Credits.**

Offered intermittently. A study of various authors; may include Bulgakov, Nabokov, Solzhenitsyn, etc.

### **RUSS 424 - Russian Short Story. 3 Credits.**

Offered intermittently. Prereq., RUSS 202 or consent of instructor. A chronological study of the Russian short story, 19th and 20th centuries.

### **RUSS 440 - Russian Poetry. 3 Credits.**

Offered intermittently. Prereq., RUSS 202 or consent of instructor. The evolution of Russian poetry from the end of the 18th century to the contemporary period.

### **RUSS 491 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **RUSS 492 - Independent Study. 1-6 Credits.**

(R?6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **RUSS 493 - Study tours / Study abroad. 1-12 Credits.**

(R-10) Offered intermittently. University omnibus option for independent work.

### **RUSS 494 - Seminar in Russian Studies. 1-3 Credits.**

(R?9) Offered intermittently. Prereq., WRIT 101 or equivalent, and one intermediate writing course and consent of instructor. Topics of the seminar include 1.) The Russian Novel and 2.) Dostoevsky and 3.) Women and Gender in Russian Culture. May be taken for honors credit through the Davidson Honors College. No knowledge of Russian is necessary, but Russian majors will be required to do selected readings in the original Russian. Fulfills the upper-division writing expectation for Russian majors. Topics announced in class schedules.

Gen Ed Attributes: Writing Course-Advanced

### **RUSS 594 - Seminar. 1-3 Credits.**

University Of Montana

**RUSS 596 - Independent Study. 1-6 Credits.**

(R?6) Offered intermittently.

## Science (SCN)

### **SCN 105N - Montana Ecosystems. 3.000 Credits.**

Offered autumn and spring. Offered at Missoula College. An introduction to the landscapes and ecosystem diversity of Montana, with an emphasis on exploring the dominant habitats of western Montana. Required, integrated laboratory includes field trip investigations, classroom lab exercises, and presentations. Gen Ed Attributes: Natural Science Lab Course (N)

Gen Ed Attributes: Natural Science Course (N)

### **SCN 176N - Integrated Physical Science II. 3 Credits.**

Offered spring term intermittently. Offered at Missoula College. An introduction to the fundamental principles of environmental and earth sciences. Course emphasizes the scientific method and process of science.

Gen Ed Attributes: Natural Science Course (N)

## Social Work (S W)

### **S W 100S - Introduction to Social Welfare. 3 Credits.**

Offered autumn and spring. Overview of human services, programs and problems in meeting social welfare needs, with emphasis on the complexity of social services and their historical development. Analysis of the value, attitudinal, economic and political factors that condition the provision of these services.

Gen Ed Attributes: Social Sciences Course (S)

### **S W 198 - Internship. 1-3 Credits.**

(R-3) Offered autumn and spring. Prereq., consent of instructor. Application of classroom learning in off campus internship placements. Prior approval must be obtained from the School of Social Work practicum coordinator and from the Center for Work-Based Learning. A maximum of 6 credits of Internship (198, 398,) may count toward graduation.

### **S W 200 - Intro to Social Work Practice. 3 Credits.**

Offered autumn and spring. Prereq., S W 100, sophomore standing. Introduction to social work as a profession, including an examination of goals, guiding philosophy and basic assumptions. Emphasis on a generalist framework of social work practice and the development of beginning analytical and practice skills.

### **S W 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **S W 300 - Human Behavior & Social Environment. 3 Credits.**

Offered autumn and spring. Prereq., on introductory writing course, one intermediate writing course, S W 200, junior standing in Social Work and consent of instructor. Using the ecological-social systems framework, the integration of knowledge and concepts from the social and behavioral sciences for analysis and assessment of problems and issues relevant to professional social work practice.

Gen Ed Attributes: Writing Course-Advanced

### **S W 310 - S W Policy & Services. 3 Credits.**

Offered autumn and spring. Prereq., S W 300. Social welfare history, program planning and analysis with review of selected policies on the national level. Includes international comparisons. Upper-division writing course.

### **S W 323 - Women & Social Action in America. 3 Credits.**

Offered intermittently. Prereq., one of S W 100, SOCI 101S, or ANTY 101H or consent of instr. Focus on womens experiences of and contributions to social change in North, South and Central America in the mid to late-20th century. Through case studies, testimonials, discussions with activists and Internet connections examine social constructions of gender, compare forms of social action in diverse cultural, political and historical contexts, link practice to theories of social participation, and reflect on lessons learned from womens experiences.

### **S W 350 - Social Work Intervention Methods I. 3 Credits.**

## University Of Montana

Offered autumn and spring. Prereq., S W 200 and consent of instructor. The study and application of the generalist model of social work practice and related techniques and procedures for the assessment, intervention and prevention of problems in social functioning. Emphasis on individuals and families.

### **S W 360 - Social Work Intervention Methods II. 3 Credits.**

Offered autumn and spring. Prereq., S W 300 and S W 350. The study and application of the generalist model of social work practice and related techniques and procedures for the assessment, intervention and prevention of problems in social functioning. Emphasis on groups and team meetings.

### **S W 391 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **S W 398 - Internship. 1-3 Credits.**

(R-3) Offered autumn and spring. Prereq., consent of instructor. Application of classroom learning in off campus internship placements. Prior approval must be obtained from the School of Social Work practicum coordinator and the Center for Work-Based Learning. A maximum of 6 credits of Internship (198, 398) may count toward graduation.

### **S W 400 - Social Work Research. 3 Credits.**

Offered autumn and spring. Prereq., S W 350. Utilization of social research findings in social work practice. Techniques for the collection and analysis of clinical data. Special emphasis on research methodology for the assessment of practitioner and program effectiveness.

### **S W 410E - Social Work Ethics. 3 Credits.**

Offered autumn and spring. Prereq., S W 350. Analysis of specific ethical dilemmas from personal, professional and policy perspectives. Focus on ethical issues common to the helping professions and utilizing codes of ethics as guides to decision-making. The relationship between professional ethical issues and the development of social policy.

Gen Ed Attributes: Ethical & Human Values Course

### **S W 419 - Adverse Childhood Development. 2 Credits.**

Offered autumn. Prereq., admission to the program or consent of instructor. This is an online one credit course that is required for students enrolled in the Child Welfare Certificate Program. The course provides students with knowledge of how such socially adverse experiences as substance abuse, poverty, discrimination, and family violence can impact cognitive, emotional, and psycho-social development. Students will learn how these environmental stressors can negatively impact children's academic achievement, health, mental health, and social functioning. Level: Undergraduate and Graduate

### **S W 420 - Child Abuse/Child Welfare. 3 Credits.**

Offered autumn. Prereq., junior standing or consent of instr. Signs and symptoms of physical and sexual abuse and neglect, family dynamics in abuse and neglect, the legal context, programs of prevention and intervention, foster care, special needs adoptions and related issues in child welfare.

### **S W 421 - Interventions with High-risk Families. 2 Credit.**

## University Of Montana

Offered spring. Prereq., admission to the program and consent of instructor. This is an online one credit course that is required for students enrolled in the Child Welfare Certificate Program. The course provides students with knowledge about the effects of significant life events (substance abuse, violence, death) on families and how to develop effective strength-based practice skills to assess parents and/caregivers abilities to provide care and to participate in treatment planning.

### **S W 423 - Addiction Studies. 3 Credits.**

Offered spring. Examination of chemical dependency and behavioral compulsions, including alcohol and other drugs, gambling, eating disorders, sexual addictions. Ecosystems perspective on etiology, treatment, prevention, family dynamics, community response, and societal contributors. Students engage in a service learning community project which is integrated into the classroom through initial training, regular reflection, and other activities.

### **S W 424 - Professional Skills Lab. 2 Credits.**

An online two credit course that is required for students enrolled in the Child Welfare Certificate Program. The course provides students with the practice skills needed to successfully enter the child welfare field and include: conducting assessments, interviewing children, adults, and families, family engagement, documentation, case management, crisis intervention, and preparing and testifying in court.

### **S W 426 - Substance Use Disorders and Social Work Skills Sets. 3 Credits.**

Offered spring and summer. Prereq., S W 423 and consent of instr. This course is designed to help Licensed Addiction Tract social work students build on the knowledge and theories introduced in SW 423, while building competencies in core skill- sets required for working directly with populations impacted by substance use disorders. Students will participate in curriculum designed to meet current State of Montana Behavioral Health Licensing standards to satisfy LAC curriculum requirements while demonstrating SAMHSA competencies at their degree level and appropriate within their BSW or MSW scope of practice.

### **S W 427 -Motivational Interviewing. 2 Credits.**

This blended course will provide foundations for proficiency in understanding and use of Motivational Interviewing (MI). MI will be taught through an inter-professional education (IPE) model as an evidence-based interview practice to support behavior change and enhance the delivery of best practice approaches between client and practitioner in various allied health and human service fields.

### **S W 450 - Children and Youth at Risk. 3 Credits.**

Offered autumn or spring. Focus on the aspects of society that pose a threat to today's youth and the ramification of those threats on youth development and behavior. Resilience and protective factors for youth at risk and strategies to work with those youth. Attention to related systems in Missoula and Montana, including juvenile justice, mental health, child protection, substance abuse, and education.

### **S W 452 - Systems of Care. 2 Credit.**

Offered autumn. Prereq., admission to certificate program or consent of instructor. This is an online one credit course that is required for students enrolled in the Child Welfare Certificate Program. The course provides students with knowledge of the social service, juvenile justice, mental health, health, and education systems and their role in promoting success among high-risk children and youth.

### **S W 455 - Social Gerontology. 3 Credits.**



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Offered autumn. Examination of the field of social gerontology, including an examination of the major bio/psycho/social/cultural/spiritual theories of aging, the service system, social and health issues, family and care-giving dynamics, social policy, and end of life concerns.

### **S W 463 - Social Justice in Indian Country. 2 Credits.**

Offered autumn. This provides the senior undergraduate/graduate student with an overview of the history and context of the social and political issues impacting tribal communities. This course also provides an opportunity for students to become familiar with the strengths, values, and cultural paradigms of North American tribes while also providing the foundation for understanding the health, education, and environmental disparities of AI/AN people.

### **S W 464 - Cultural Humility in Social Work Practice: Valuing Diversity. 3 Credits.**

Prereq., S W 300. A required diversity course specific to social work to be offered once or twice per year, depending on need; delivery method will vary to meet student needs.

### **S W 465 - Social Work Global Context. 3 Credits.**

Offered spring even-numbered years. Prereq., upper-division or graduate standing. Examination of globalization, human rights, poverty, international aid, and gender issues; their relationship to social work and social justice, and strategies for action.

### **S W 472 - Relational Development. 3 Credits.**

Offered autumn and spring. This course covers strategies to help children whose early experiences deprived them of the nurturing needed to develop the essential capacity to connect with others. Emphasis is on significant discoveries in the fields of neuroscience, childhood trauma, grief and loss, child development, and family systems that have fueled the evolution of the Attachment Treatment philosophy to a broader method of caring for emotionally distressed children, the Relational Development treatment approach.

### **S W 475 - Death, Dying and Grief. 3 Credits.**

Offered intermittently. Examination of death, dying and grief from an ecological perspective, focusing on the processes of dying and theories of grief. Emphasis on physical, social, psychological, spiritual, and cultural influences that surround death and grief. Consideration of cultural norms, attitudes toward death, medical, legal and ethical issues of dying. Focus on normal and complicated grief.

### **S W 487 - Advanced Practice I. 2 Credits.**

Offered every term. Prereq., S W 350 and Coreq., S W 495 and admission to the practicum program. Consideration and discussion of practicum-related matters, professional development, and issues confronting the profession.

### **S W 488 - Advanced Practice II. 2 Credits.**

Prereq., S W 350 and Coreq., S W 495 and admission to the practicum program. Consideration and discussion of practicum-related matters, professional development, and issues confronting the profession.

### **S W 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## University Of Montana

### **S W 492 - Independent Study. 1-10 Credits.**

(R-10) Offered intermittently. Prereq., 10 credits in social work. Independent work under the University omnibus option. See index.

### **S W 495 - Field Work Practicum. 5 Credits.**

(R-10) Offered every term. Prereq., S W 350 and approved application to practicum coordinator. Practicum must be taken over two consecutive semesters for a total of 10 credits. Minimum of one credit per semester. Cumulative grade average of 2.75 or above in S W 100, S W 200, S W 300, S W 350 and S W 360 and a 3.0 grade average for S W 200, S W 350 and S W 360 are required. Supervised field work in public and private agencies and institutions. Successful completion of the field work practicum requires a passing performance on the school administered professional social work competency examination.

### **S W 500 - Orientation. 1 Credit.**

Prereq., admission to M.S.W. program. Seminar introducing M.S.W. students to program philosophy and social works theory and value base. Level: Graduate

### **S W 505 - Foundations of Social Work Practice. 2 Credits.**

Prereq., admission to M.S.W. program. Introductory practice course that examines generalist social work practice, dominant theoretical influences, and forces shaping social work over time. Level: Graduate

### **S W 510 - Human Behavior and Social Environment I. 3 Credits.**

Prereq., admission to M.S.W. program. Introduction to and critical consideration of social work perspectives on human behavior as influenced by the social environment. Particular attention is paid to biological, psychological, social, cultural and spiritual influences. Level: Graduate

### **S W 511 - Human Behavior and Social Intervention II. 3 Credits.**

Prereq., admission to M.S.W. program and S W 510 or consent of instr. Advanced course on human behavior and social environment that addresses difference and diversity, histories and mechanisms of discrimination and oppression, and frameworks for thought and practice that recognize diversity and promote social justice. Level: Graduate

### **S W 515 - Practice with Individuals & Families. 3 Credits.**

Prereq., admission to M.S.W. program or consent of instr. Practice-oriented course building on students developing knowledge of engagement, assessment, intervention and evaluation and the application to practice with individuals and families in context of community. Level: Graduate

### **S W 520 - SW Research Methods. 3 Credits.**

Prereq., admission to M.S.W. program or consent of instr. Introduction to principles, methodologies, technologies, and statistical approaches of human service research. Emphasis on beginning capabilities in evaluation of social work practice and skill development regarding use of published research. Level: Graduate

### **S W 521 - Advanced Research. 3 Credits.**

## University Of Montana

Prereq., S W 515. The use of research within the integrated practice model of social work through evaluation of practice and program evaluation. Advanced statistical concepts are applied to direct practice and five types of program evaluation. Level: Graduate

### **S W 525 - Practicum in Groups & Communities. 4 Credits.**

Prereq., admission to M.S.W. program or consent of instr. Practice oriented course addressing theories, frameworks, principles, and skills of group and community work. Dynamics of group work and examination of modalities such as mutual aid and social action groups. Level: Graduate

### **S W 530 - History of Social Policy. 3 Credits.**

Prereq., admission to M.S.W. program or consent of instr. Foundation in social welfare policy and services; examination of relationship between history social welfare policy and emergence of social work profession. Introduction to frameworks for policy analysis. Level: Graduate

### **S W 531 - Social Policy Analysis. 3 Credits.**

Prereq., S W 530. Focus on the analysis of existing or proposed policies specific to oppressed populations, rural areas and isolated communities. Level: Graduate

### **S W 532 - Indian Child Welfare Act. 1 Credit.**

Prereq., Prerequisites include admission into the MSW program. This course will provide students with an understanding of the Indian Child Welfare Act including the historical events leading to its passage and contemporary issues surrounding implementation of the law. Students will apply knowledge of the law to practice and build skills on working across cultural differences in order to promote the best interest of American Indian children and families.

### **S W 535 - Advanced Practice. 4 Credits.**

Prereq., consent of instr. Builds on the skills, knowledge, and values of the foundation generalist and practice courses. Level: Graduate

### **S W 545 - Organizational Leadership. 3 Credits.**

Prereq., consent of instr. Advanced training in professional leadership and how to effectively conceive, plan, design, implement, manage, assess, and change contemporary organizations. Level: Graduate

### **S W 551 - Couples and Family Therapy. 3 Credits.**

Offered spring. Prereq., admission to the MSW program, S W 505, or consent of instructor. Course explores family-centered methods of clinical social work interventions with couples and families that can be applied in a variety of settings. Level: Graduate

### **S W 552 - Psychopathology & S W. 3 Credits.**

Prereq., admission to the MSW program, S W 505, or permission of instructor. Focus on current problems of children, adolescents, and adults of all ages that can be classified as a mental disorder under the DSM of the system. Includes information on theories within the bio-psycho-social paradigm of causality of disorders/conditions; on methods of assessment, including DSM; and an understanding of how social injustice, oppression and poverty impacts healthy growth and development across the life span. Level: Graduate

## University Of Montana

### **S W 553 - Social Work Addictions. 3 Credits.**

Offered spring semester. Prereq., admission to MSW program or by permission of instructor. The course examines historical and contemporary models of direct practice, and current ideological, political, policy and systemic challenges to the practice of social work in the addictions. Level: Graduate

### **S W 576 - Found Integrative Seminar I. 1 Credit.**

Prereq., admission to MSW program. Seminar accompanying first semester foundation practicum in which students discuss experience with goal of integrating theory and practice. Level: Graduate

### **S W 577 - Found Integrative Seminar II. 1 Credit.**

Prereq., admission to MSW program, S W 505, S W 587. Seminar accompanying second semester foundation practicum in which students discuss experience with goal of integrating theory and practice. Level: Graduate

### **S W 578 - Advanced Seminar I. 1 Credit.**

Prereq., SW 587. Critical analysis of how predominant social work theories and professional values and skills are being incorporated into the practicum. Level: Graduate

### **S W 579 - Advanced Seminar II. 1 Credit.**

Prereq., S W 578. Critical analysis of how predominant social work theories and professional values and skills are being incorporated into the practicum. Advanced portfolio development. Level: Graduate

### **S W 586 - Foundation Practicum I. 2 Credits.**

Prereq., admission to MSW program. First semester foundation field practicum experience in a supervised setting designed to provide opportunities to integrate classroom learning and field experiences. Course graded only on CR/NCR basis. Level: Graduate

### **S W 587 - Foundation Practicum II. 2 Credits.**

Prereq., admission to MSW program, S W 505, S W 587. Second semester foundation field practicum experience in a supervised setting designed to provide opportunities to integrate classroom learning and field experiences. Level: Graduate

### **S W 588 - Concentration Practicum I. 3 Credits.**

Prereq., S W 587, Coreq.,S W 578. Advanced supervised field work in public and private agencies and institutions. Course graded only on CR/NCR basis. Level: Graduate

### **S W 589 - Concentration Practicum II. 3 Credits.**

Prereq., S W 588. Advanced supervised field work in public and private agencies and institutions. Level: Graduate

### **S W 593 - Professional Portfolio. 1 Credit.**

Prereq., foundation courses. Summative and in-depth written analysis of course work and practicum experience. Level: Graduate

### **S W 594 - Graduate Seminar. 3 Credits.**

## University Of Montana

(R-9) Offered autumn or spring. Prereq., admission to MSW program or consent of instr. In-depth analysis of a current social work issue. Level: Graduate

### **S W 595 - Special Topics. 1-9 Credits.**

(R-9) Offered autumn and spring. Prereq., admission to MSW program or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **S W 596 - Independent Study. 1-9 Credits.**

(R-9) Offered autumn or spring. Prereq., admission to MSW program or consent of instr. Work on selected problems by individual students under direct faculty supervision. Level: Graduate

### **S W 597 - Research. 1-9 Credits.**

(R-9) Offered autumn or spring. Prereq., admission to MSW program or consent of instr. Directed individual graduate research and study appropriate to background and objectives of the student. Level: Graduate

## Sociology (SOCI)

### **SOCI 101S - Introduction to Sociology. 3 Credits.**

Offered every term. Overview of the principles and concepts used in the study of human social interaction, groups, communities and societies. Required of all majors.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 130S - Sociology of Alternative Religions. 3 Credits.**

Offered spring. Unconventional religious groups in American society. Topics include recruitment, conversion, commitment, defection, leadership, belief systems, organizational structure and change.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SOCI 202 - Social Statistics. 3.000 Credits.**

Offered every term. Prereq., M 115. Application of descriptive and inferential statistical techniques to sociological data. Required for all Sociology majors.

### **SOCI 211S - Introduction to Criminology. 3 Credits.**

Offered autumn. A critical examination of crime in society: how crime is defined, the extent and distribution of crime, theoretical explanations of criminal behavior, and crime control efforts.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 212S - Social Issues Southeast Asia. 3 Credits.**

Offered every other year. Introduction to the cultures, societies, and contemporary social problems of Southeast Asia.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 220S - Race, Gender & Class. 3 Credits.**

Offered autumn. Same as WGS 220S. Analysis of the intersecting structure and dynamics of race, gender and class. Focus on power relationships, intergroup conflict and minority-group status.

Gen Ed Attributes: Social Sciences Course (S), Democracy and Citizenship (Y)

### **SOCI 221 - Criminal Justice System. 3 Credits.**

Offered spring. A systematic survey of crime and the administration of justice in the United States, including the organizational structures, processes, and dynamics of law enforcement, criminal adjudication, and corrections.

### **SOCI 260S - Introduction to Juvenile Delinquency. 3 Credits.**

## University Of Montana

Offered spring. The study of juvenile delinquency as a social phenomenon, including the emergence of "juvenile delinquency" as a social and legal concept, the nature of delinquency, and theoretical explanations of delinquent behavior.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 270 - Intro Development Sociology. 3 Credits.**

Offered autumn. Introduction to sociological perspectives on international development, globalization, and sustainability. Rural and environmental issues emphasized.

### **SOCI 275S - Gender and Society. 3 Credits.**

Offered spring. Exploration of the social construction of gender, especially in western, post-industrial societies such as the U.S.; gender ideologies affect the social definition and position of gendered individuals in work, family, sexual relationships, gendered divisions of labor, and social movements.

Gen Ed Attributes: Social Sciences Course (S)

### **SOCI 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SOCI 306 - Sociology of Work. 3 Credits.**

Offered intermittently. An introduction to contemporary sociological debates on work including overwork, working poor, housework, globalization, mechanization, routinization, surveillance, and unions. Special focus on gender and class impacts on working life.

Gen Ed Attributes: Writing Course-Intermediate

### **SOCI 312 - Criminal Adjudication. 3 Credits.**

Offered spring odd-numbered years. Prereq., SOCI 101S, SOCI 221 and either SOCI 211S or SOCI 260S. An examination of adjudicatory processes applied to the criminally accused. Includes pretrial, trial, and sentencing practices and procedures. Special attention to the sociological dimensions of criminal adjudication: its cultural underpinnings, structural characteristics and interactional dynamics.

### **SOCI 318 - Sociological Research Methods. 3 Credits.**

Offered every term. Prereq., SOCI 101S, Sociology majors only, or consent of instr. Methods of research in the social sciences including naturalistic observation, interviewing, measurement, experiments, surveys, content analysis, and basic data analysis. Required of all majors.

### **SOCI 325 - Social Stratification. 3 Credits.**

Offered intermittently. Prereq., SOCI 101S or SOCI 220S or SOCI 275S. The origins, institutionalization and change of class, status, prestige, power and other forms of social inequality. Special attention to the effects of stratification on individuals.

### **SOCI 332 - Sociology of the Family. 3 Credits.**

## University Of Montana

Offered autumn. Prereq., SOCI 101S. Historical, cross-cultural, and analytical study of the family. Emphasis on ideology, social structures, and agency affecting family composition and roles.

### **SOCI 335 - Juvenile Justice System. 3 Credits.**

Offered autumn. Prereq., SOCI 101S and SOCI 211S or SOCI 260S. An analysis of the juvenile justice system in the United States, including the historical development of policies and practices. The role of various social agencies in defining, preventing, and responding to delinquency.

### **SOCI 345 - Sociology of Organizations. 3 Credits.**

Offered intermittently. Prereq., SOCI 101S. Historical and analytical study of organizations as social systems, with an emphasis on applying theoretical models to analyzing organizational behavior and change.

### **SOCI 346 - Rural Sociology. 3 Credits.**

Offered intermittently. Prereq., SOCI 101S. Demographic, economic and sociocultural change in rural communities with an emphasis on global economy, political structure, urbanization, and economic and social infrastructure. Special attention given to the rural west and Montana.

### **SOCI 350 - The Community. 3 Credits.**

Offered intermittently. Prereq., SOCI 101S. The study of families, peer groups, neighborhoods, voluntary associations, power structures, social classes and large scale organizations as they come together in local communities.

### **SOCI 355 - Population and Society. 3 Credits.**

Offered spring. Prereq., SOCI 101S. An introduction to contemporary world population problems including population growth, trafficking, fertility, mortality, population policy, and the relationship between population and environment. Emphasizes gender issues in international context.

### **SOCI 362 - Sociology of Law Enforcement. 3 Credits.**

Offered autumn even-numbered years. Prereq., SOCI 101S, SOCI 221 and either SOCI 211S or SOCI 260S. An examination of policing in society, with emphasis on the cultural context in which it occurs, its structural characteristics, and social psychological processes.

### **SOCI 382 - Social Psychology and Social Structure. 3 Credits.**

Offered autumn. Prereq., SOCI 101S. The study of the behavior of individuals in social contexts ranging from small groups to societies. Topics include attitude change, conformity, power, status, self-concept formation, and decision-making.

### **SOCI 386 - Preceptorship in Sociology. 2-3 Credits.**

Offered autumn and spring. Prereq., SOCI 101S and consent of instr. Assisting a faculty member by tutoring, conducting review sessions, helping students with research projects, and carrying out other class-related responsibilities. Open to juniors and seniors with instructor's consent. Proposals must be approved by department chair.

### **SOCI 391 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of new courses or one time offerings of current topics.



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### **SOCI 398 - Internship. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **SOCI 423 - Sociology of Corrections. 3 Credits.**

Offered spring. Prereq., SOCI 101S, SOCI 221 and either SOCI 211S or SOCI 260S. An examination of the purposes, structures, and processes of jails, prisons, and community corrections, including probation and parole. Emphasis on historical development and current trends and issues in corrections.

### **SOCI 435 - Law and Society. 3 Credits.**

Offered spring even-numbered years. Prereq., SOCI 101S. The study of the law and society, including the origin, institutionalization, and impact of law and legal systems.

### **SOCI 438 - Seminar in Crime & Deviance. 3 Credits.**

Offered every term. Prereq., WRIT 101 or equivalent, one intermediate writing course and consent of instructor. Advanced studies in criminology theory, research, and practice. This course will meet the upper-division writing expectation for sociology majors only.

Gen Ed Attributes: Writing Course-Advanced

### **SOCI 441 - Capstone: Inequality and Social Justice. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, one intermediate writing course, SOCI 101S, two inequality and social justice courses and consent of instr. Research and writing on Inequity and Social Justice. Students bring together readings from other inequality content courses and/or independent readings, research methods training, and data and/or internship experience to write a final research paper on a topic of their choice within the ISJ area. Meets advanced writing expectation.

Gen Ed Attributes: Writing Course-Advanced

### **SOCI 442 - ISJ Service Learning. 3-4 Credits.**

Prereq, consent of instr. Supervised fieldwork and research in settings relevant to Inequality and Social Justice, building participatory research and critical thinking skills; relationships with people in groups marginalized by systems of inequality; citizenship awareness.

### **SOCI 443 - Sociology of Poverty. 3 Credits.**

Offered autumn. Prereq. junior or senior standing or consent of instr. An examination of the roots, prevalence, and social characteristics of poverty. Analysis of policies intended to end poverty.

### **SOCI 446 - Prostitution & Human Trafficking. 3 Credits.**

Offered every other year. Prereq., Restricted to Sociology and Women, Gender, and Sexuality Studies majors, or consent of instr. Exploration of prostitution and human trafficking, their incidence, causes, implications for individuals and society, and responses from non-governmental organizations and governments. Highlights various feminist and human rights approaches to these phenomena. Level: Undergraduate-Graduate

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### **SOCI 455 - Classical Sociological Theory. 3 Credits.**

Offered autumn and spring. Prereq., SOCI 101S, or consent of instr. Exploration of the classical foundations of sociological theories, emphasizing Marx, Durkheim, and Weber. Required of all sociology majors.

### **SOCI 470 - Environmental Sociology. 3 Credits.**

Offered autumn. Introduction to environmental sociology and the social dimensions of environmental change. Case studies of major environmental problems as applications of environmental sociological perspectives.

### **SOCI 471 - Gender and Global Development. 3 Credits.**

Offered every other year. Prereq., SOCI 270 or SOCI 275S or consent of instructor. Advanced perspectives on the relationships between gender and colonization, international development, and globalization.

### **SOCI 485 - Political Sociology. 3 Credits.**

Offered spring odd-numbered years. Prereq., junior or senior standing. Analysis of power; states; institutional interrelationships; production and transmission of ideologies; political participation and membership; social movements.

### **SOCI 488 - Writing for Sociology. 3 Credits.**

Offered autumn and spring. Prereq., WRIT 101 or equivalent, one intermediate writing course and consent of instructor. Advanced study of variable topics or issues in sociology, with emphasis on writing for the discipline. This course satisfies the upper-division writing expectation for sociology majors only.

Gen Ed Attributes: Writing Course-Advanced

### **SOCI 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SOCI 492 - Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., SOCI 101S and consent of instr. Individual work with a faculty supervisor in an area of special interest. Proposals must be approved by department chair.

### **SOCI 494 - Seminar/Workshop. 2-3 Credits.**

Offered intermittently. Prereq., SOCI 101S and at least junior standing. Selected sociological topics.

### **SOCI 498 - Internship. 1-6 Credits.**

(R-12) Offered every term. Prereq., SOCI 101S, 202, and 318; 3.0 GPA; junior standing and consent of instr. Supervised placement in an agency or business which involves work experience related to Sociology, Criminology, and/or inequality and social justice.

### **SOCI 520 - Contemporary Social Theory. 3 Credits.**

Offered autumn. Sociology Graduate Student or consent of instr. The major sociological theories developed since World War I, including an examination of the critical issues under debate. Level: Graduate

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### **SOCI 538 - Seminar in Crime & Deviance. 3 Credits.**

(R-9) Offered intermittently. Consent of instructor. Graduate-level studies of a specific criminological topic or issue with special emphasis on theory, research, policy, and practice. Level: Graduate.

### **SOCI 545 - Seminar in Inequality & Social Justice. 3 Credits.**

Offered spring. Graduate student in Sociology or consent of instr. Advanced study of variable topics in inequality and social justice held in a small group setting that maximizes opportunities for graduate student research, discussion, and writing. Level: Graduate

### **SOCI 561 - Qualitative Methods. 3 Credits.**

Offered spring. Consent of instr. Introduction to the basic methods used to conduct qualitative studies including ethnography, interviewing, observation and/or focus group. Includes hands-on fieldwork projects, data coding and analysis, and research ethics. Draws on examples and literature from sociology. Students should have had undergraduate research methods training. Level: Graduate

### **SOCI 562 - Quantitative Methods. 3 Credits.**

Offered autumn. Prereq., SOCI 101S, 318 and 202. Introduction to the basic methods used to conduct quantitative sociological research and program evaluation including proposal development, survey design, sampling techniques, data analysis, and dissemination of findings. Level: Graduate

### **SOCI 563 - Social Data Analysis. 3 Credits.**

Offered spring. Consent of instr. A hands-on introduction to preparing sociological reports and documents, performing research and statistical tasks common to the field. Presumes no previous knowledge of microcomputers. Level: Graduate

### **SOCI 590 - Sociology Internship. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Supervised placement for graduate students in an agency or business which involves work experience related to criminology, sociology, rural and environmental change and/or inequality and social justice.. Level: Graduate

### **SOCI 594 - Graduate Seminar. 3 Credits.**

(R-9) Offered intermittently. Selected sociological topics. Level: Graduate

### **SOCI 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **SOCI 596 - Independent Study. 1-6 Credits.**

(R-6) Offered every term. Prereq., consent of instr. Work with a faculty supervisor in an area of special interest. Level: Graduate

### **SOCI 597 - Graduate Research. 2-3 Credits.**

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(R-9) Offered every term. Directed research. Student must develop a specific research or evaluation proposal which is approved by the instructor prior to registration. Those students electing the professional paper option may apply three credits of 597 toward graduation. Level: Graduate

### **SOCI 598 - Internship. 1-6 Credits.**

(R-6) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **SOCI 599 - Thesis/Professional Paper. 1-6 Credits.**

(R-6) Offered every term. Students may apply six credits of 599 toward graduation. Level: Graduate

## South/Southeast Asian Studies (SSEA)

### **SSEA 202X - Introduction to India. 3 Credits.**

Offered alternate years. This course introduces students to the history, economy, political and legal system, society, culture, religions, and literary and artistic traditions of India, which is the world's largest secular democracy and the birthplace of four major world religions.

### **SSEA 330X - Peoples and Cultures of World. 3 Credits.**

Offered intermittently. Same as ANTY 330X. Ethnographic survey of societies and cultures of Indonesia and the Philippines.

### **SSEA 342 - Topics in Comparative Literature & Religion. 3 Credits.**

Offered intermittently. Same as LSH 342. These courses compare major traditions, texts and trends in two or more world civilizations or cultures. Works of literature and/or philosophy are examined in their historical contexts, and in relation to each other.

### **SSEA 368 - Contemporary Buddhism in SSEA. 3 Credits.**

Offered intermittently. No prerequisites. Like other major religions, modernity and globalization have presented profound challenges to Buddhist traditions. In this course we will explore various contemporary issues that have affected Theravada Buddhist societies-colonial and post-colonial revivalism, religious nationalism, women's rights and social reform-as case studies of some of the major ways religions have confronted modernity.

## Spanish (SPNS)

### **SPNS 101 - Elementary Spanish I. 4 Credits.**

Offered autumn. Emphasis on oral communication, with development in all major skill areas: listening, speaking, reading and writing.

### **SPNS 102 - Elementary Spanish II. 4 Credits.**

Offered spring. Prereq., SPNS 101 or requisite placement exam score. Continuation of 101.

Gen Ed Attributes: Foreign Language Requirement

### **SPNS 191 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SPNS 201 - Intermediate Spanish I. 4 Credits.**

Offered autumn. Prereq., SPNS 102 or requisite placement exam score. Continued practice in the oral skills with added emphasis on grammar and reading proficiency.

Gen Ed Attributes: Foreign Language Requirement

### **SPNS 202 - Intermediate Spanish II. 4 Credits.**

Offered spring. Prereq., SPNS 201 or requisite placement exam score. Continuation of 201.

Gen Ed Attributes: Foreign Language Requirement

### **SPNS 291 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

### **SPNS 292 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **SPNS 301 - Spanish: Oral and Written Expression. 3 Credits.**

Offered autumn and spring. Prereq., SPNS 202 or equiv. Development of oral and written skills with an emphasis on Hispanic cultural context.

Gen Ed Attributes: Foreign Language Requirement

### **SPNS 302 - Spanish in Oral and Written Expression II. 3 Credits.**

Offered spring. Prereq., SPNS 202 or equiv. Further development of oral and written skills with an emphasis on Hispanic cultural context.

### **SPNS 305 - Spanish Phonetics. 3 Credits.**

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Offered once each academic year. Prereq., SPNS 202 or consent of instr. A practical and theoretical exploration of the Spanish sound system.

### **SPNS 306 - Commercial Spanish. 3 Credits.**

(R?6) Offered intermittently. Prereq., SPNS 301. The use of business concepts and terminology in Spanish. Conducted entirely in Spanish. Investigation of cultural attitudes, resources of the Hispanic world, ways in which Hispanics conduct business, practice in business letter writing.

### **SPNS 308 - Intensive Spanish Abroad. 1-9 Credits.**

(R?9) Offered spring. Prereq., SPNS 202 or equiv. Intensive Spanish language course to coincide with intensive language course given at an institute or college during the Spanish Study Abroad Program. Credits vary according to the hours and intensity of the foreign language course and are determined by the director of the program.

### **SPNS 315 - Topics in Hispanic Culture. 3 Credits.**

Prereq., WRIT 101 or equivalent, and one intermediate writing course. This course offers a rigorous and comprehensive study of a major author, work, cultural phenomena, or relevant issue in the Spanish-speaking world.

### **SPNS 321 - Advanced Conversations. 3 Credits.**

Offered intermittently. Prereq., SPNS 202. Intensive practice in oral Spanish through individual presentations, vocabulary and grammar work, and film discussion and analysis.

### **SPNS 326 - Contemporary Spanish Lit. 3 Credits.**

Offered autumn and spring. Prereq., SPNS 202 or equiv. The study of contemporary works by peninsular authors, including an introduction to literary genres.

### **SPNS 331 - Cultures and Societies of Latin America. 3 Credits.**

Offered autumn and spring. Prereq., SPNS 202 or equiv. An interdisciplinary introduction to Latin American culture, society, and history with emphasis on contemporary aspects.

### **SPNS 355 - Topics in Spanish Literature and Culture. 1-9 Credits.**

(R?9) Offered intermittently in spring. Prereq., SPNS 326 or SPNS 331 or consent of instr.

### **SPNS 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SPNS 392 - Independent Study. 1-6 Credits.**

(R-12) Course material appropriate to the needs and objectives of the individual student.

### **SPNS 398 - Internship. 1-6 Credits.**

Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship may count toward

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graduation.

### **SPNS 400 - Introduction to Spanish Linguistics. 3 Credits.**

Offered autumn. Prereq., SPNS 305. Topics in Spanish linguistics with an emphasis on Spanish morphology, syntax and semantics.

### **SPNS 408 - Spanish: Advanced Composition & Conversation. 3 Credits.**

Offered spring. Prereq., SPNS 301 or consent of instr. Intensive practice in writing on different levels of usage and style, combined with guided oral practice.

### **SPNS 432 - Latin American Literature. 3 Credits.**

(R?6) Offered regularly. Prereq. SPNS 326 or 331 or consent of instr. Emphasis on major works of the 20th century.

### **SPNS 465 - Spanish Literature: Renaissance and Golden Age. 3 Credits.**

(R-6) Offered autumn even-numbered years. Prereq., SPNS 326 or 331 or consent of instr.

### **SPNS 466 - Spanish Literature: Modern & Contemporary. 3 Credits.**

(R-6) Offered spring even-numbered years. Prereq., SPNS 326 or 331 or consent of instr.

### **SPNS 491 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **SPNS 492 - Independent Study. 1-6 Credits.**

(R-6) Offered autumn and spring. Course material appropriate to the needs and objectives of the individual student.

### **SPNS 494 - Seminar. 1-12 Credits.**

(R?12) Offered regularly. Prereq., SPNS 326 or 331. Studies in major authors, periods, or genres.

### **SPNS 498 - Internship. 1-6 Credits.**

### **SPNS 499 - Senior Thesis/Capstone. 3 Credits.**

Offered in both the fall and spring. Prereq., having finished at least 15 upper-division hours in Spanish. This course is designed to be a culminating experience in which the student will demonstrate skills and knowledge garnered from his/her experience within the Spanish Option. We will offer two possibilities for the Capstone: 1) The student can research, write and revise an extensive research paper under the supervision of a Spanish faculty member. The capstone topic selected will directly relate to the language, literature, culture, history and/or civilization of the Spanish-speaking peoples of the world. 2) The student can fulfill a high impact field experience or internship experience as the culminating activity in the program. In this case, students can demonstrate their knowledge, skills, and values in a wide variety of ways. Field experiences and internships may be evaluated by both a faculty member and a field supervisor under whom the student is working. Evaluations may consist of check sheets and evaluation forms that the



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supervisor and faculty complete both during and at the end of the experience, notes from advisory meetings with the student during the experience, and materials that the student produces during the experience, perhaps gathered into a portfolio.

### **SPNS 500 - Directed Readings. 1-3 Credits.**

(R?6) Offered intermittently. Prereq., undergraduate major in Spanish. Level: Graduate

### **SPNS 594 - Graduate Seminar. 3 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. A review and discussion of current research. Topics vary. Level: Graduate

### **SPNS 595 - Special Topics. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one?time offerings of current topics. Level: Graduate

### **SPNS 596 - Independent Study. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Out?of?class independent work of a research nature which involves intensive use of University or other libraries; also research work carried on in another country under the direction of a University professor. Level: Graduate

### **SPNS 599 - Professional Paper. 1-6 Credits.**

(R?6) Offered intermittently. Prereq., graduate standing. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **SPNS 699 - Thesis. 1-9 Credits.**

(R?9) Offered intermittently. Prereq., graduate standing. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Speech Language Pathology (SLP)

### **SLP 520 - Articulation & Phonological Disorders. 3 Credits.**

Offered intermittently. Prereq., SLP graduate program standing. Theoretical perspectives on phonological and articulation disorders with emphasis on application to clinical management including evaluation, assessment techniques, and intervention strategies. Level: Graduate

### **SLP 530 - Voice & Motor Speech Disorders. 4 Credits.**

Prereq., SLP graduate standing. Study of anatomy, physiology, and pathology of voice. Diagnosis and management of voice and resonance disorders. Neural bases of normal and disordered speech motor control. Assessment and treatment of motor speech disorders. Level: Graduate

### **SLP 540 - Fluency Disorders. 3 Credits.**

Prereq., SLP graduate program standing. This course focuses on the nature, diagnosis, and treatment of stuttering, cluttering, and acquired neurogenic dysfluency. Students examine assessments of historic and current literature and trends in stuttering research and treatment. Culturally responsive assessment and intervention, as well as the multidimensional nature of fluency are addressed. Level: Graduate

### **SLP 545 - Autism and Complex Communication Needs. 2-4 Credits.**

Offered intermittently. Prereq., graduate standing. This course explores and integrates social aspects of communication (e.g., behavioral and social skills affecting communication) and communication accommodations, adaptations, and links to functional and daily-living in individuals with severe to complex communication disorders. This includes a focus on assessment and treatment processes and evidence-based practices for prevalent diagnoses such as autism spectrum disorder. Level: Graduate

### **SLP 546 - Alternative Augmentative Communication and Complex Communication Needs II. 1-2 Credits.**

Offered intermittently. Prereq., SLHOS graduate standing. This course explores and integrates communication accommodations, adaptations, and links to functional and daily-living in individuals with severe to complex communication disorders. This includes a focus on assessment and treatment processes and practices for individuals requiring alternative and augmentative communication needs across the lifespan, cultures, and abilities. Level: Graduate

### **SLP 550 - Language Assessment and Intervention for Children Infants through Preschool. 3 Credits.**

Offered intermittently. Prereq., graduate standing. Students learn language assessment and intervention for children with language delays and disorders from birth to preschool including language sampling and analysis procedures, interpreting formal and informal testing, facilitating language through strategies and corresponding theories, planning clinical management and intervention, and enhancing emergent literacy. Level: Graduate

### **SLP 560 - Language Assessment and Intervention for School-Age Children and Adolescents. 3 Credits.**

Prereq., SLP graduate program standing. This course examines various approaches to working with children and adolescents with language and learning disabilities. Practical application of language assessment procedures, individualized planning, and language-literacy intervention strategies will be discussed.

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Language-literacy interventions in the classroom and collaborative strategies will also be covered. Culturally responsive assessment and intervention, as well as the multidimensional nature of language in the classroom will be addressed. Level: Graduate

### **SLP 561 - Evidence Based Practice in Rehabilitation and Education. 1-3 Credits.**

Offered Intermittently. Prereq., SLHOS graduate program standing with a framework for understanding, using, and applying the evidence-based practice trilogy (client values, clinical expertise, research) in rehabilitation and Education practice. Students will gain exposure to writing style in research, ethics, and evaluating evidence in clinical application.

### **SLP 565 - Aphasia & Acquired Apraxia of Speech. 3 Credits.**

Prereq., SLP graduate program standing. Neural bases and medical etiologies of acquired apraxia of speech and acquired cognitive-linguistic disorders in adults. Evaluation and treatment of aphasia and apraxia of speech in persons with acquired neurologic disorders across successive stages of recovery. Incorporates models of rehabilitation across prevention, assessment, and treatment, with a focus on the WHO ICF and aspects of disability across diverse populations. Level: Graduate

### **SLP 566 - Acquired Cognitive-Communication Disorders. 3 Credits.**

Offered intermittently. Prereq., SLHOS Graduate standing. Assessment, treatment, and prevention of acquired cognitive-communication disorders including pediatric and adult traumatic brain injury (TBI) and mild traumatic brain injury (MTBI), right hemisphere syndrome (RHS), and dementia. Emphasis on neurobiological principles of rehabilitations, differential diagnosis and theories, and evidence-based research pertaining to clinical management. Level: Graduate

### **SLP 570 - Clinical Processes in Professional Practice I. 1 Credit.**

(R-3) Offered intermittently. Prereq., SLP graduate program standing. This course provides content focused on the professional practices, processes, attributes, and abilities associated with professional accountability, ethics, integrity, effective communication skills, clinical reasoning, evidence-based practice, and collaborative practice. In addition clinical consideration of multicultural aspects of communication are considered of clients from all ages, backgrounds, and abilities. Links to clinical application in associated applied classes are made. Level: Graduate

### **SLP 571 - Foundational Applied Clinic in Service Learning. 1-6 Credits.**

(R-9) Offered intermittently; on campus only. Prereq., SLP graduate program standing or permission of Director of Clinical Education. Foundational Application of professional skills associated with the UM DeWit RiteCare Clinic. Assignment of cases and area of specialization will vary with clinical educator assignment. Level: Graduate

### **SLP 575 - Advanced Clinical Processes in Professional Practice II. 1-3 Credits.**

(R-3) Offered autumn. Prereq., SLP 570, coreq., SLP 576. This course provides content focused on continued development of topics related to professional development as a speech-language pathologist and will support the clinical externship experience. Emphasis on professional practices and processes, ASHA and state compliance, clinical problem solving, evidence based practice, employment settings considerations, self-advocacy, communication, and multicultural considerations. Level: Graduate

### **SLP 576 - Advanced Applied Clinic II. 1-12 Credits.**

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Offered intermittently. Prereq., SLP 570., coreq. SLP 575. Advanced application of professional skills in the UM RiteCare Clinic or off-campus. Assignment of cases and area of specialization will vary with the clients needs and availability. Out of state placement by approval of clinical director. Level: Graduate.

### **SLP 580 - Diagnostics. 3 Credits.**

Offered intermittently. Speech, Language, Hearing and Occupational Sciences Graduate standing. Students will develop the following skills: using case history information to form a diagnostic plan; administering various standardized and non-standardized diagnostic tools; interpreting assessment results; writing diagnostic reports; and sharing diagnostic results with clients, caregivers and other professionals. Level: Graduate

### **SLP 591 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **SLP 592 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **SLP 594 - Graduate Seminar. 1-12 Credits.**

(R-3) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary.

### **SLP 595 - Practicum. 1-12 Credits.**

Offered intermittently. Prereq., consent of instr. Level: Graduate

### **SLP 600 - Research Methods. 3 Credits.**

Offered spring. Prereq., SLP graduate program standing. Research methodologies appropriate for quantitative and qualitative studies in communication sciences and disorders. Focuses on critical reading of research papers, design, and implementation of experiments. Level: Graduate

### **SLP 601 - Evidence-Based Practice. 1 Credit.**

Offered autumn. Prereq., graduate standing. In this course, students will study the process of clinical decision-making based on research, clinical expertise, and patient values. This clinical decision-making process is one in which bias is reduced through the use of assessment and interventions that reflect an integration of the best available research evidence with clinical expertise and patient values.

### **SLP 640 - Swallowing Disorders. 3 Credits.**

Prereq. SLHOS graduate program standing. Study of anatomy, physiology, and pathology of swallowing. Diagnosis and treatment of swallowing disorders. Level: Graduate

### **SLP 675 - Clinical Externship/ Advanced Practicum. 1-12 Credits.**

(R-12) Offered every term. Prereq., permissions of Clinic Extern Coordinator and completion of SLP 570, SLP 575 coursework and clinical practicum SLP 571 and SLP 576 with a total of 200 clinical clock hours or more. The course is an externship completed during a student's final semester of graduate school requiring 30-40

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hours a week participation. Out of state placements approved by the clinical externship coordinator. Level: Graduate

### **SLP 688 - Masters Science Capstone Portfolio. 3 Credits.**

Offered spring and autumn. Prereq., or Corereq., SLP 600. An integration evidence-based practice foundations in Speech-Language Pathology. This course requires comprehensive portfolios that include a best-evidence systematic literature review, a clinical philosophy reflecting current learning theory, and evidence of application of current best practices. Level: Graduate

### **SLP 689 - Professional Seminar. 1 Credit.**

(R-9) Offered intermittently. Prereq., SLHOS Grad standing and instructor permission. This doctoral level seminar is designed to help develop research, teaching, and professional skills required for post-doctoral employment. Sessions will be conducted in a face-to-face (on-campus or via synchronous web-based videoconferencing) format. Each week invites active student engagement in several types of activities, including: reading, writing, reviewing/editing, engaging in discussions, and presenting research and/or teaching modules.

### **SLP 690 - Research. 1-3 Credits.**

Offered intermittently. Doctoral student standing. Research including scholarly inquiry, investigation, or creative activity that follows appropriate conventions, is guided by an academic mentor, and produces original intellectual or creative work. Offered CR/NCR only. Level: Graduate

### **SLP 691 - Special Topics. 1-5 Credits.**

(R-6) Offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **SLP 692 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Doctoral Student Standing. This course is an intensive exploration of a discipline, interdisciplinary practice, or theory not available through regularly scheduled courses. A student performs coursework in consultation with and supervised by a faculty member. The course of study is aligned with the needs and learning objectives of the individual student. Level: Graduate

### **SLP 694 - Grad Seminar. 1-12 Credits.**

(R-6) Offered intermittently. Prereq., graduate standing. Level: Graduate

### **SLP 695 - Practicum. 1-3 Credits.**

Offered intermittently. Prereq., consent of instr. Level: Graduate

### **SLP 696 - Service Learning. 1-6 Credits.**

Offered Intermittently. Doctoral Student Standing. This course is a collaboration between students, faculty, and community partners to enhance student learning by applying academic knowledge in a community service context. Student service addresses community identified needs and meets learning objectives through faculty/community-structured service. It incorporates critical reflection to prepare students to be civically engaged members of the community. Level: Graduate

### **SLP 698 - Internship. 1-6 Credits.**

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Offered Intermittently. Doctoral Student Standing. This internship is an opportunity for practical application of classroom learning through professional, career-related work experiences. All interns have a set of learning objectives, a faculty advisor, and site supervisor. There is opportunity for performance feedback from faculty and/or supervisor. The interns' work benefits a business, nonprofit, or government agency. Level: Graduate

### **SLP 699 - Thesis. 1-6 Credits.**

(R-9) Offered autumn, spring, summer. Prereq., CSD 600, Graduate standing and consent of instructor. The primary purpose of the thesis is to allow a student to conduct a research project in a particular field of study related to speech and language pathology. Level: Graduate

## Surgical Technology (AHST)

### **AHST 101 - Introduction to Surgical Technology. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., admission to the program. Provides an orientation to the scrub and circulatory roles of the surgical technologist in the preoperative, intraoperative and postoperative periods. Entry level skills and theories are emphasized.

### **AHST 115 - Surgical Lab I. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., admission to the program. Demonstration of sterile technique in the campus lab, various skills and their application in the operating room.

### **AHST 154 - Surgical Pharmacology. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., admission to the program, M 105 or 115 or above. Basic overview of the medications commonly used before, during, and after a surgical procedure.

### **AHST 164 - Microscopy for the Surgical Tech. 3 Credits.**

Offered at Missoula College.

### **AHST 191 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **AHST 200 - Operating Room Techniques. 5 Credits.**

Offered autumn. Offered at Missoula College. Prereq., AHST 101, 115, and 154. Focus is on the scrub and circulator roles of the surgical technologist in the preoperative, intraoperative, and postoperative periods, more complex skills and theories, and the impact of new technologies in the 21st century operating room.

### **AHST 201 - Surgical Procedures I. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., AHST 101, 115, and 154. A study of surgical procedures following the patient through the preoperative, intraoperative, and post-operative stages of specific surgical specialties.

### **AHST 202 - Surgical Procedures II. 5 Credits.**

Offered spring. Offered at Missoula College. A study of surgical procedures following the patient through the preoperative, intraoperative, and postoperative stages of specific surgical specialties.

### **AHST 215 - Surgical Lab II. 2 Credits.**

Offered autumn. Offered at Missoula College. Demonstration of more complex skills in the campus lab, including assistant circulating, and their applications in the operating room.

### **AHST 250 - Surgical Clinical I. 4 Credits.**

Offered autumn. Offered at Missoula College. Perioperative experience in minor surgical procedures through a supervised clinical hospital rotation.

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### **AHST 251 - Surgical Clinical II. 5 Credits.**

Offered spring. Offered at Missoula College. Perioperative experience in major surgical procedures through a supervised clinical hospital rotation.

### **AHST 298 - Surgical Internship. 5 Credits.**

Offered spring. Offered at Missoula College. Capstone experience in the perioperative role in preparation for initial employment, increasing occupational awareness and professionalism. Students take call for emergency surgeries alongside experienced hospital staff.



## Surveying (SRVY)

### **SRVY 108 - Construction Surveying. 2 Credits.**

Offered autumn. Offered at Missoula College. Basic principles of surveying and the use of surveying equipment. Calculation of angles and distances to determine grade elevations. Introduction to Global Positioning Systems, lasers and their relationship to the heavy equipment operator.

### **SRVY 230 - Intro to Surveying for Engineers. 3 Credits.**

Offered spring. Offered at Missoula College. M 090 or appropriate score on math-skills test recommended prior to taking course. Basic principles of civil surveying and the use of surveying equipment. Surveying introduces students to the link between field (construction) and office (design) practices. Students will become familiar with Global Positioning Systems (GPS), levels, level rods, total stations, basic survey computations, and their relationship to Computer Design Systems.

## Sustainable Energy (NRGY)

### **NRGY 102 - Intro to Sustainable Energy II. 3 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., NRGY 101 or consent of instructor. Same as CCS 102. A survey of renewable energy systems and technologies. Addresses physical and technical aspects of wind, solar, geothermal, hydro, tidal, biological, and wave energy systems. Consideration is given to engineering, economic, social, environmental, and political factors that determine implementation and sustainability. Credit not allowed for both NRG 102 and CCS 102.

### **NRGY 120 - Industrial Safety and Rigging. 3 Credits.**

Offered autumn. Offered at Missoula College. This course provides an overview of safe industrial practices and provides students with hands-on experiences in rigging for a variety of industries. Students will complete the requirements for an OSHA 30 certification, construct a scaffold system, identify equipment for shifting heavy loads such as may be used in the wind and solar industries. Load security, fall gear, arrest equipment, confined spaces, safety data sheets will be covered. Students will also learn elements of first aid, cardio-pulmonary resuscitation (CPR), and proper use of Automated External Defibrillators (AED's).

### **NRGY 191 - Special Topics. 1-3 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NRGY 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **NRGY 195 - Practicum. 2 Credits.**

Offered summer. Offered at Missoula College. Prereq., NRGY 101, M 121 or consent of instructor. Same as CCS 191. The practicum provides students with a supervised field experience. Students will gain hands-on experience with energy specific technologies in a fast-paced creative environment. This course increases students' occupational awareness and professionalism.

### **NRGY 196 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **NRGY 243 - Fundamentals of Photovoltaic Design & Installation. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., M 121, Prereq./Co-req., ETEC 105. An introduction to the fundamental principles and technologies of solar photovoltaic energy systems. Emphasis on system design and installation, including site and resource assessment, load analysis, troubleshooting, and cost analysis. The material covered prepares students for a career in renewable energy or for installing a renewable energy system on their own home.

### **NRGY 244 - Bioenergy. 3 Credits.**

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Offered spring. Offered at Missoula College. Prereqs., SCN 175N, M 121 and NRGY 102, or consent of instructor. Investigates the physical nature of various biorenewable resources and the technologies currently employed to produce, harvest, refine and convert these into useable energy, feedstocks and products.

### **NRGY 245 - Fuel Cells. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., NRGY 101, M 121. An introduction to the different types of fuel cells (hydrogen, biological, metal/air, proton exchange membrane, etc.) accompanied by a critical examination of their applications, operation, efficiencies, advantages and disadvantages. Students must purchase a fuel cell kit for a laboratory component.

### **NRGY 250 - Energy Finance. 3 Credits.**

Offered summer. Offered at Missoula College. An introduction to the terminology, policies, and mathematical models for financing energy technology projects. Concepts covered include time value of money, tax code, triple bottom line, and cost-benefit analysis. Microsoft Excel will be used.

### **NRGY 290 - Undergraduate Research. 1-10 Credits.**

Offered every term. Offered at Missoula College. Preq., consent of instr. Independent research under the direction of a faculty member.

### **NRGY 291 - Special Topics. 1-4 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of Energy Technology faculty and visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **NRGY 292 - Independent Study. 1-9 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **NRGY 295 - Practicum. 2 Credits.**

Offered at Missoula College. The practicum provides students with a supervised field experience. Students will gain hands-on experience with energy specific technologies in a fast-paced creative environment. This course increases students' occupational awareness and professionalism.

### **NRGY 298 - Internship. 2 Credits.**

Offered every term. Prereq., M 121 and consent of instructor. Same as CCS 298. Extended classroom experience providing practical application of classroom learning through on the job training in a student's field of study. This experience increases student skills, prepares them for initial employment, and increases occupational awareness and professionalism.

### **NRGY 299 - Energy Technology Capstone. 3 Credits.**

(R-9) Offered spring and autumn. Offered at Missoula College. Students participate in an energy technology design, building, testing, and competition. Previous examples include participation in the Shell EcoMarathon and the American Society of Mechanical Engineering Human Powered Vehicle Challenge. This

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course is very time intensive and will require meetings outside of regularly scheduled class times. Travel to competition is strongly encouraged, but not required.

## Theatre (THTR)

### **THTR 101L - Introduction to Theatre. 3.000 Credits.**

Offered autumn and spring. The various elements of play production and dance. The basic artistic principles underlying dance, theatre and all of the arts.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **THTR 102A - Introduction to Theatre Design. 3 Credits.**

Offered autumn. Basic understanding of the principles of design for the theatre and television, including the production elements of scenery, costumes and lighting.

Gen Ed Attributes: Expressive Arts Course (A)

### **THTR 103 - Introduction to House Management. 1 Credit.**

(R-3) Offered autumn and spring. Introduction to the skills and experience of the front-of-house staff for a theatrical production.

### **THTR 106 - Theater Production I: Run Crew. 1 Credit.**

(R-6) Offered autumn and spring. Operation and running a show backstage on a scenery, costume, or prop crew for a major school production.

### **THTR 107A - Theater Production I: Construction Crew. 3 Credits.**

(R-9) Offered autumn and spring. The construction and completion of scenery/props, costumes, and/or lighting under supervision. Most assignments involve very basic construction techniques and/or maintenance duties found in professional shop. Involves minimum of two 4-hour labs a week.

Gen Ed Attributes: Expressive Arts Course (A)

### **THTR 113A - Introduction to Voice Acting. 3 Credits.**

An introduction to the skills and techniques required of the actor's voice to be effective in communication with others online, onstage, and in the world.

Gen Ed Attributes: Expressive Arts Course (A)

### **THTR 120A - Introduction to Acting I. 3 Credits.**

Offered every term. An introduction to the skills and techniques required of the actor to be effective in communication with others on stage and off stage.

Gen Ed Attributes: Expressive Arts Course (A)

### **THTR 121 - Introduction to Acting II. 3 Credits.**

Offered autumn and spring. Prereq., THTR 120A. Continuation of 120A.

### **THTR 155 - Drawing Fundamentals for Theatre. 3 Credits.**

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Offered spring. Students will begin to develop skills in drawing the human form, perspective, and architecture.

### **THTR 191 - Special Topics/Experimental Courses. 1-6 Credits.**

(R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **THTR 194 - Seminar/ Workshop. 1-8 Credits.**

### **THTR 202 - Stagecraft I. 3 Credits.**

Offered autumn. Fundamental theories and hands-on application in the areas of costuming, lighting, scenery, and properties.

### **THTR 203 - Stagecraft II: Scenery & Props. 3 Credits.**

Fundamental theories and hands-on application in the areas of scenery, properties, and rigging.

### **THTR 205 - Theatre Workshop II. 1-8 Credits.**

(R-8) Offered autumn and spring. Credit for students engaged in any aspect of production including acting, directing, lighting, stagecraft, makeup, costumes, properties, business and publicity.

### **THTR 206 - Theatre Production II: Run Crew. 1 Credit.**

(R-6) Offered autumn and spring. Prereq., THTR 106. Operation and running a show backstage, as in scenery, costumes, or props for a major school production.

### **THTR 207 - Theatre Production II: Construction Crew. 3 Credits.**

(R-6) Offered autumn and spring. The construction and completion of scenery/props, costumes, and/or lighting. Advanced construction assignments and/or maintenance duties found in professional shop; possible supervision of a small construction crew. Involves minimum of two 4-hour labs a week.

### **THTR 210 - Voice & Speech I. 3 Credits.**

Offered autumn. Prereq., THTR 221 or consent of instr. Voice production, phonetics and speech for the stage.

### **THTR 211 - Voice & Speech II. 3 Credits.**

Offered spring. Prereq., THTR 210. Character voices, which broadly encompass dialects and accents.

### **THTR 220 - Acting I. 3 Credits.**

Offered autumn and spring. Studio class intended to cultivate skill sets necessary for those with a background or interest in the craft of acting, especially those considering a career in the performing arts (theatre, music, dance, film, broadcasting): observation, imagination, concentration, improvisation, and character.

### **THTR 221 - Acting II. 3 Credits.**

Offered spring. Prereq., THTR 220. Continuation of THTR 220. Scene study and characterization, utilizing modern and contemporary scripts.

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### **THTR 229 - Production Acting I. 1 Credit.**

(R-4) Offered autumn and spring. Credit for acting in approved productions.

### **THTR 235L - Dramatic Literature. 3 Credits.**

Offered autumn and spring. The study of representative theatre texts as a foundation for play analysis. Gen Ed Attributes: Lit & Artistic Studies (L).

### **THTR 239A - Creative Drama/Dance: K-8. 2 Credits.**

Offered autumn and spring. Restricted to majors in Elementary Education and Early Childhood Education: P-3. Focus on the use of creative drama and dance as types of educational tools. Students will explore, experience, and implement creative teaching methods in order to promote scholarship through kinesthetic teaching in elementary education.

Gen Ed Attributes: Expressive Arts Course (A)

### **THTR 245 - Intermediate Costume Construction. 3 Credits.**

Offered spring. Intermediate costume construction focusing on the development of skills needed to function as a stitcher.

### **THTR 249 - Stage Makeup I. 1 Credit.**

Principles of and practice in makeup for the stage.

### **THTR 255 - Drafting for Theatre I. 3 Credits.**

Offered spring. Drawing techniques for the theatre with an emphasis on drafting as utilized by technicians, designers, stage managers and directors.

### **THTR 256 - Intermediate Scenery Construction. 3 Credits.**

Prereqs., THTR 107A, THTR 202, and THTR 255 or 355. Advances students' skills in scenic carpentry through practical application of construction drafting, construction planning, project management, advanced layout processes, advanced tool usage, and team management. Students will realize projects to be used in current and future School of Theatre and Dance productions.

### **THTR 264 - Master Electrician. 3 Credits.**

Prereq., THTR 107A and THTR 202. Training for the position of master electrician and assistant lighting designer. Practical application of production planning, lighting paperwork, overseeing lighting crews, advanced electrical theory, power distribution, and creative problem solving. Students will work on major school productions.

### **THTR 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **THTR 292 - Independent Study. 1-12 Credits.**

(R-12) Offered autumn and spring. Independent study in all the arts of the theatre.

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### **THTR 294 - Seminar. 1-6 Credits.**

Foundational preparation for professional and curricular auditions.

### **THTR 305 - Theatre Workshop III. 1-20 Credits.**

(R-20) Offered autumn and spring. Prereq., consent of instructor. Advanced laboratory production in all the arts of the theatre.

### **THTR 306 - Summer Theatre. 1-12 Credits.**

(R-12) Offered summer. Prereq., consent of instr. Practicum in school-approved summer theatre companies in the capacity of actor, designer, director, stage manager and/or technician.

### **THTR 307 - Production Construction I. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., THTR 107A and consent of instr. Students serve as the construction/maintenance crew in a shop (sound, light, costume, or scenery) for School productions.

### **THTR 308 - Production Team I. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Students function as part of the production team in a role of responsibility (i.e., master electrician, cutter, first hand, master carpenter, etc.) for a school production. These assignments and duties may serve also as part of the required junior project.

### **THTR 309 - Production Design I. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Students function as a member of the production team in a role of responsibility (i.e., scenic designer, costume designer, light designer, etc.) for a school production. These assignments and duties may serve also as part of the required junior project.

### **THTR 310 - Voice and Speech III. 3 Credits.**

Offered autumn. An advanced exploration of voice acting skills and techniques culminating in the application of industry standards and best practices to recorded and live performances.

### **THTR 311 - Voice and Speech IV: Poetic Language. 3 Credits.**

Offered spring. Integration of voice and speech skills, vocal character.

### **THTR 315 - Movement for the Actor I. 3 Credits.**

Offered spring. Prereq., THTR 221 or consent of instr. Basics of physical performance: collaboration, concentration, centering, balance, agility, and body awareness through a variety of stage movement techniques.

### **THTR 316 - Movement for the Actor II. 3 Credits.**

Offered autumn. Prereq., THTR 315. Physical characterization: exploring weight, rhythm, tempo, and kinesthetic relationships using techniques such as Laban and Michael Chekhov.

### **THTR 320 - Acting III. 3 Credits.**



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Offered autumn. Prereq., THTR 221. Process-based and systematic approach to scene work, character development and rehearsal, focusing on new and emerging playwrights of the contemporary era (21st century).

### **THTR 321 - Advanced Acting: Practitioners. 3 Credits.**

Offered spring. Prereq., THTR 320 and BFA theatre major. This course will introduce a variety of contemporary theatre and actor-training methods to interrogate contemporary scripts. Students perform selected scenes using chosen strategies from the methodologies studied.

### **THTR 322 - Musical Theatre Audition Techniques. 2 Credits.**

Offered spring. Prereq., THTR 320. A foundational studio course which focuses on the development and practice of musical-theatre audition skills. The course will comprise specialized training in requisite areas of singing, acting, dancing and materials preparation pertaining to the format, demands and performance of musical-theatre auditions.

### **THTR 329 - Production Acting II. 1 Credit.**

(R-4) Offered autumn and spring. Prereq., THTR 229. Credit for acting in approved productions.

### **THTR 330H - Theatre History I. 3 Credits.**

Offered autumn. Prereq., WRIT 101 (or higher) or equivalent, or consent of instr. A survey of the major developments of the theatre from ritual beginnings to the 19th century, including various cultures and their representative plays and performances throughout the world.

Gen Ed Attributes: Historical Studies, Writing Course-Intermediate.

### **THTR 331 - Theatre History II. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, one intermediate writing course, THTR 330H or theatre minor. Continuation of THTR 330H. The many and varied periods since the 19th century as reflected in the theatre of the times in America, Europe and throughout the world.

Gen Ed Attributes: Writing Course-Advanced

### **THTR 332 - Dramaturgy. 3 Credits.**

Prereq., THTR 330H or consent of instr. Introduction to the work of the dramaturg; to literary, historical, and contextual analysis of play scripts and performance pieces intended for production; and to building study guides and/or other resources.

### **THTR 336 - Costume History. 3 Credits.**

Offered intermittently. History of costume from prehistory to the present day.

### **THTR 340 - Costume Design I. 3 Credits.**

Offered autumn. Prereq., THTR 102A, 202. Introduction to principles and practices of stage costume design.

### **THTR 345 - Flat Pattern Design & Drafting. 3 Credits.**

Offered autumn. Prereq., THTR 202. Pattern design using the flat pattern method, pattern drafting of various garment parts, advanced principles of fitting.

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### **THTR 346 - Textile Selection & Manipulation. 3 Credits.**

Offered spring alternate years. Analysis of fibers, yarns, structures and finishes, as related to selection and use for the theatre. Basic dyeing, distressing and painting.

### **THTR 349 - Stage Makeup II. 1 Credit.**

Offered spring. Prereq., THTR 249. Continuation of THTR 249. Advanced techniques in makeup design and application including specialty work in prosthetics, hair and wig, advanced character makeup, and understanding both cultural sensitivity and makeup resources for underserved populations.

### **THTR 350 - Scenic Design I. 3 Credits.**

Offered autumn. Prereq., THTR 102A, 202. Introduction to the problems encountered in designing scenery, analyzing of script, research and practical demands of theatre conventions. Projects include those for theatre, musicals, opera, and dance.

### **THTR 351 - Production Design for Film and Television. 3 Credits.**

Offered autumn and spring. Introduction to the basic elements of production design for film and television. Students will be exposed to the basics of visual storytelling, including script analysis for production design, storyboards, shot composition, visual research, drafting, and pre-production planning. Students will also gain an understanding of location versus studio work and film versus television design.

### **THTR 353 - Technical Direction. 1-3 Credits.**

Offered intermittently. Prereq., THTR 255 or consent of instr. Training for position of technical director. The role and scope of technical direction, production scheduling, design analysis, budgets and bookkeeping, and methods of construction.

### **THTR 355 - Computer Aid Draft & Applications. 3 Credits.**

(R-6) Offered autumn. Prereq., THTR 255. Computer drafting for scenery, costumes, lighting, and sound design drawings, including 2-D and 3-D plans, layouts and renderings. Work with CAD, photo manipulation, spreadsheet, database, and word processing programs.

### **THTR 356 - Scenic Painting. 1-3 Credits.**

(R-6) Offered spring. Introduction to the basic skills needed as a scenic artist. Emphasis on the varied materials and techniques used in the scenic studio, color mixing, and interpretation of the designer's work.

### **THTR 357 - Properties Management. 1 Credit.**

(R-8) Offered autumn and spring. Provides students with the necessary skills and training to serve as a properties manager for a theatrical production. Students participate in the production process, learning through hands on activities and practical training and guidance in the acquisition and/or construction of all props for a given production/show.

### **THTR 360 - Theatre Lighting I. 3 Credits.**

Offered autumn. Prereq., THTR 102A, 202. Introduction to principles and practices of theatre lighting design. Training for position of lighting designer for theatre. Design requirements and decisions, color, development of stage picture; concentration on proscenium theatre design concepts.

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### **THTR 364 - Lighting Programming. 2 Credits.**

Training for students to serve as a programmers in the professional world of live performance. Computer systems for control of lighting will be covered in depth as well as additional exposure to systems for sound and projection. Exploration of networking systems together to control a combination of the areas.

### **THTR 365 - Theatre Sound I. 3 Credits.**

Offered autumn. Prereq., THTR 102A, 202, or consent of instr. Introduction to principles and practices of theatre sound design. Training for position of sound designer for theatre. Principles, practices, and equipment used to create finished sound designs for theatre, dance and related areas.

### **THTR 370 - Stage Management I. 2 Credits.**

Offered autumn. Prereq., THTR 202. Beginning study of the duties of the stage manager concentrating on the rehearsal process in the non-professional theatre situation.

### **THTR 371 - Stage Management Practicum I. 1-3 Credits.**

(R-6) Offered autumn and spring. Prereq., THTR 370 or consent of instr. Stage management practicum involving stage managing a showcase production or assistant stage managing a major show. Involves evening work.

### **THTR 375 - Directing I. 3 Credits.**

Offered autumn and spring. Prereq., THTR 120A or THTR 220; THTR 235L; THTR 330H. Open to juniors and seniors. Introduction to the analytical skills, staging, and conceptual techniques of the director; includes some practical application in scene work.

### **THTR 380 - Playwriting. 3 Credits.**

(R-6) Offered intermittently. Techniques and practice in writing short and full-length plays.

### **THTR 385 - Theatre for Social Justice. 3 Credits.**

Offered spring. This course explores ways in which drama can be used as a tool to examine, bring awareness to, and affect social issues, including equality, health care, education, trauma, politics, and the penal system.

### **THTR 391 - Special Topics/Experimental Courses. 1-9 Credits.**

(R-15) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **THTR 392 - Independent Study. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

### **THTR 394 - Seminar/ Workshop. 1-6 Credits.**

### **THTR 395 - Practicum. 1-3 Credits.**

(R-18) Offered autumn and spring. Service learning experience in theatre in a setting compatible with the students major and interests.

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### **THTR 398 - Cooperative Education/Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (398, 498) may count toward graduation.

### **THTR 405 - Professional Theatre. 9 Credits.**

(R-18) Offered spring. Prereq., consent of instr. Laboratory experience in total play production through participation in state, regional, national and international touring production programs.

### **THTR 406 - Professional Technology and Production. 1-9 Credits.**

(R-18) Offered spring. Prereq., consent of instr. Students experience the rigors and develop the skills required of technicians in touring theatre, maintaining integrity of all production elements through three months of intensive travel and varying venues.

### **THTR 407 - Production Construction II. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as construction crew in one of the shops for productions.

### **THTR 408 - Production Team II. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as a member of the production team in a role of responsibility (i.e., master electrician, sound board operator, cutter, first hand, etc.) for major productions. These assignments and duties may serve also as part of the required senior project.

### **THTR 409 - Production Design II. 1-12 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as a member of the production team in a role of designer (i.e., set designer, costume designer, light designer, etc.) for major productions. These assignments and duties may serve also as part of the required senior project.

### **THTR 410 - Advanced Acting: Musical Theatre. 2 Credits.**

(R-4) Offered spring. Prereq., audition or consent of instr. Development and presentation of musical numbers in a dramatic context. A broad-based acquaintance with music theatre literature is acquired, and techniques for approaching songs are explored with an eye toward developing competency in music theatre forms. Co-convenes with THTR 510.

### **THTR 415 - Stage Combat. 3 Credits.**

Offered spring. Prereq., THTR 315 or consent of instructor. This course is intended for advanced students with a background in physical performance. Topics include unarmed stage combat, basic armed combat, and physical performance safety methods and procedures. Students will present the skills learned in the performance of scenes including fight choreography.

### **THTR 416 - Movement for the Actor III. 3 Credits.**

Offered spring. Advanced specialized physical skills such as period styles, advanced combat/choreography, and commedia.

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### **THTR 420 - Advanced Acting: Comedy Styles. 3 Credits.**

Offered autumn. Prereq., THTR 321 or consent of instr. Scenes and projects from specific historical and contemporary comedy styles.

### **THTR 421 - Advanced Acting: Shakespeare. 3 Credits.**

Offered spring. Prereq., THTR 321. Selected speeches, scenes and projects from verse drama, especially Shakespeare.

### **THTR 423 - Professional Performance. 1-9 Credits.**

(R-18) Offered spring. Prereq., consent of instr. Students experience the rigors and develop the skills required for actors in touring theatre; creating characters and maintaining consistent performances through three months of intensive travel and varying venues.

### **THTR 425 - Advanced Acting: Devising. 3 Credits.**

Offered autumn. Prereq., THTR 321. Performance and scene work in contemporary practice and theory, using devising techniques across performance disciplines.

### **THTR 426 - Advanced Acting: Special Skills. 3 Credits.**

Prereq., THTR 321. Developing actors' skills in specialized areas such as acting for new media, genre-specific performance, clowning, commedia, improvisation, classical repertoire, or other specialized topics dependent upon faculty and/or guest faculty areas of expertise.

### **THTR 429 - Production Acting III. 1 Credit.**

(R-9) Offered autumn and spring. Prereq., THTR 329. Credit for acting in approved Theatre & Dance productions.

### **THTR 439 - Methods of Teaching Theatre. 3 Credits.**

(R-6) Offered autumn. Prereq., consent of instr. Building and addressing specific curriculum in theatre arts.

### **THTR 440 - Costume Design II. 3 Credits.**

(R-9) Offered spring. Prereq., THTR 340. Advanced techniques in costume design; possible topics include design for dance, opera, large scale drama and musicals.

### **THTR 445 - Draping. 3 Credits.**

Offered spring. Prereq., THTR 345. Garment design based on manipulation of fabric on a body form; emphasis on creative solutions to design problems and the interrelationships between fabric, design, and form.

### **THTR 447 - Tailoring. 3 Credits.**

Offered spring alternate years. Prereq., consent of instr. Principles used in the construction of tailored garments.

### **THTR 450 - Scene Design II. 3 Credits.**

Offered spring. Prereq., THTR 350. A continuation of the techniques and projects in 350.

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### **THTR 456 - Advanced Scene Painting. 3 Credits.**

(R-9) Offered spring. Prereq., THTR 356 and/or consent of instr. Students will explore advanced scene painting techniques.

### **THTR 460 - Theatre Lighting II. 3 Credits.**

Offered spring. Prereq., THTR 360 or consent of instr. Advanced study of principles and practices of theatre lighting design. Training for position of light designer for theatre. Design requirements and decisions, color, development of stage picture; thrust and arena theatre.

### **THTR 465 - Theatre Sound II. 3 Credits.**

Offered spring. Prereq., THTR 365 or consent of instr. Advanced study of principles and practices of theatre sound design. Training for position of theatre sound designer. Principles, practices and equipment used to create sound and music designs for the theatre, dance and related areas.

### **THTR 470 - Stage Management II. 2 Credits.**

Offered intermittently. Prereq., THTR 370 or consent of instr. Additional study of stage management concentrating on pre-rehearsal duties, aspects of maintaining a show's integrity as established by the director, inter-production relationships, supervision of crews and union contracts. Understanding a stage manager's need for paperwork and writing skills. Students encouraged to enroll in THTR 472 to use skills in a living situation.

### **THTR 472 - Stage Management and Practicum II. 3 Credits.**

(R-9) Offered autumn and spring. Prereq., THTR 470 or consent of instr. Stage managing a major show in the drama season in the Montana or Masquer Theatres or assistant stage managing for an Equity stage manager on a Montana Repertory Theatre production.

### **THTR 475 - Directing II. 3 Credits.**

Offered autumn. Prereq., THTR 375 or consent of instr. Directing skills for the advanced student; extensive scene work.

### **THTR 476 - Directing III. 3 Credits.**

Offered spring. Prereq., THTR 475. Continuation of 475. Course material coordinated with laboratory projects

### **THTR 481 - Advanced Acting: Personal Performance. 3 Credits.**

Offered autumn. Prereq., THTR 321 or consent of instr. Developing personal performance skills.

### **THTR 482 - Advanced Acting: Solo Performance. 3 Credits.**

Offered spring, Prereq., THTR 481 or consent of instr. Creating solo performance material from original material or existing texts.

### **THTR 484 - Advanced Acting: Professional Skills. 1 Credit.**

Offered spring. Developing professional skills, material for the actor, professional portfolio, resume audition material, commercial acting, performance market research.

### **THTR 490 - Undergraduate Research. 1-12 Credits.**

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(R-12) Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student.

### **THTR 491 - Special Topics/Experimental Courses. 1-9 Credits.**

(R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **THTR 492 - Independent Study. 1-12 Credits.**

(R-24) Offered intermittently. Prereq., consent of school director. Course material appropriate to the needs and objectives of the individual student.

### **THTR 494 - Seminar/Workshop. 2 Credits.**

(R-6) Offered intermittently. Prereq., 10 credits in Theatre or in English dramatic literature and consent of instr. Intensive study of dramatic theory relating to acting, directing, design and dramaturgy.

### **THTR 495 - Practicum. 1-3 Credits.**

(R-9) Offered intermittently autumn and spring. Service learning experience in theatre in a setting compatible with the students major and interests.

### **THTR 498 - Cooperative Education/Internship. 1-6 Credits.**

Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (398, 498) may count toward graduation.

### **THTR 499 - Senior Project. 1 Credit.**

Offered autumn and spring. Prereq., senior-level theatre major. The student, with approval from his/her advisor, will begin a project during the semester prior to the semester of his/her graduation. An in-depth paper and brief defense of the project are required.

### **THTR 501 - Intro to Grad Studies. 1 Credit.**

Offered autumn. Introduction to basic research and writing skills. Level: Graduate

### **THTR 505 - Professional Theatre. 9 Credits.**

(R-18) Offered spring. Prereq., consent of instr. Laboratory experience in total play production through participation in state, regional, national, and international touring production programs. Level: Graduate

### **THTR 506 - Graduate Summer Theatre. 1-3 Credits.**

(R-6) Offered summer. Prereq., consent of instr. Practicum in school-approved summer theatre companies in the capacity of actor, designer, director, stage manager and/or technician. The student and instructor will meet prior to the students registration for the course in order to determine the proper credit load and work expectations for the course. Student will earn credit for said work in consultation with Director of the School and outside producing company, with credit correlating to significance of above-listed duties. Level: Graduate

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### **THTR 507 - Technical Production Assignment. 2-4 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Production assignment made by the faculty. Student assigned a responsible technical position such as technical director, master electrician, sound engineer, cutter/drafter or scenic artist. Credit variable and will be assigned by faculty. Level: Graduate

### **THTR 508 - Design Production Assignment. 2-4 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Production design assignment made by the faculty. Student designs an element of a Theatre & Dance production with the supervision of a faculty designer. Level: Graduate

### **THTR 509 - Technical Direction Practicum. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Technical direction of a major show in the drama season in the Montana or Masquer Theatres. Level: Graduate

### **THTR 510 - Graduate Musical Theatre. 2 Credits.**

(R-4) Offered spring. Development and presentation of musical numbers in a dramatic context. A broad-based acquaintance with music theatre literature is acquired, and techniques for approaching songs are explored with an eye toward developing competency in music theatre forms. Co-convenes with THTR 410. Level: Graduate

### **THTR 512 - Problems in Voice and Speech. 1-3 Credits.**

(R-12) Offered intermittently. Development of specific advanced skills in vocal work. Level: Graduate

### **THTR 513 - Graduate Voice & Speech I. 3 Credits.**

Offered autumn. Studio training with extensive focus on exercises designed to foster awareness of how the body, breath, voice, resonance, and enunciation are the artists tactics when acting. Level: Graduate

### **THTR 514 - Graduate Voice & Speech II. 3 Credits.**

Offered spring. Continuation of 513; advanced studio encompassing standard speech, character voice, accent and dialect-acquisition studies. Level: Graduate

### **THTR 515 - Graduate Physical Performance Skills. 3 Credits.**

Offered autumn. Investigation of the history and methodology of major physical-performance models. Studio work resulting in exercises and scene work to accompany each discipline explored. Level: Graduate

### **THTR 517 - Problems in Physical Performance. 1-3 Credits.**

(R-12) Offered autumn and spring. Development of specific advanced skills in physical performance. Level: Graduate

### **THTR 520 - Graduate Acting I. 3 Credits.**

(R-12) Offered autumn. Intensive rehearsal and project work with emphasis on integration of advanced skills. Level: Graduate

### **THTR 521 - Grad Acting II. 3 Credits.**



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Offered spring. Continuation of 521; intimate exploration of monologues, scene work, and contemporary techniques. Level: Graduate

### **THTR 525 - Problems in Acting. 1-3 Credits.**

(R-18) Offered autumn and spring. Development of specific advanced skills in acting. Level: Graduate

### **THTR 526 - Studio Training I. 3 Credits.**

Offered autumn. Scenes and projects from specific historical and contemporary comedy styles. Level: Graduate

### **THTR 527 - Studio Training II. 3 Credits.**

Offered spring. Work in speeches, scenes, and projects from Shakespeare and other classical verse drama. Level: Graduate

### **THTR 528 - Studio Training III. 3 Credits.**

Offered autumn. Performance and scene work in contemporary practice and theory. Course will additionally familiarize students with contemporary performance theory and criticism. Level: Graduate

### **THTR 529 - Studio Training IV. 3 Credits.**

Offered spring. Developing professional skills, material for the actor, professional portfolio, resume audition material, commercial acting, performance market research, and knowledge about unions. Level: Graduate

### **THTR 530 - Graduate Seminar in Dramatic Literature. 3 Credits.**

(R-9) Offered intermittently. Selected topics with individual research projects presented in seminar concerning various genres, periods, and themes in dramatic literature. Level: Graduate

### **THTR 531 - Graduate Seminar in Theatre History. 3 Credits.**

(R-9) Offered intermittently. Selected topics and issues with individual research projects presented in seminar concerning various genres, periods, themes, and cultural contexts in theatre history. Level: Graduate

### **THTR 532 - Graduate Seminar in Dramaturgy. 3 Credits.**

A graduate-level introduction to literary, historical, and contextual analysis of play scripts and performance pieces intended for production. Level: Graduate

### **THTR 535 - Performance Theory & Criticism. 3 Credits.**

Offered spring. Survey of the theories, elements and ingredients of multi-cultural live performance forms, including theatre, popular entertainment, ceremonies, and other public events. Includes instruction in and application of various approaches to the criticism of live performance. Level: Graduate

### **THTR 539 - Graduate Methods Teaching Theatre. 3 Credits.**

In-depth study of teaching methods for presenting the craft of acting and theatre production to introductory-level students. Co-convenes with THTR 439. Level: Graduate

### **THTR 540 - Graduate Costume Design. 3 Credits.**

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(R-12) Offered autumn and spring. Prereq., consent of instr. Further advancement of techniques in costume design using script/character analysis, color/texture/form usage, and presentation. Possible designs for dance, opera, large-scale drama and musicals. Co-convenes with THTR 440. Level: Graduate

### **THTR 542 - Problems in Costume Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in costume design. Level: Graduate

### **THTR 544 - Graduate Flat Pattern Design & Drafting. 3 Credits.**

Offered intermittently, Pattern design using the flat pattern method, pattern drafting of various garment parts, advanced principles of fitting. Level: Graduate

### **THTR 545 - Graduate Design Seminar I. 2 Credits.**

Offered autumn. This course is designed to teach graduate students effective research, collaboration, and script-analysis methodologies and exploration practices. Level: Graduate

### **THTR 546 - Graduate Design Seminar II. 2 Credits.**

Offered spring. This course is designed to continue the design process skills developed in Seminar I of effective research, collaboration and script-analysis methodologies and exploration practices. Level: Graduate

### **THTR 550 - Graduate Scene Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific design skills in scenery through unrealized design opportunities as well as design concept and process development. Co-convenes with THTR 450. Level: Graduate

### **THTR 552 - Problems in Scene Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in scene design. Level: Graduate

### **THTR 553 - Technical Direction. 3 Credits.**

Offered autumn and spring. Prereq., consent of instr. Role and scope of technical direction, production scheduling, design analysis, budgets and bookkeeping and methods of construction. Level: Graduate

### **THTR 555 - Graduate Computer Aided Drafting and Application. 3 Credits.**

(R-6) Offered autumn. Students will further their understanding for how CAD software is used to create complete, accurate draftings for design and technology in theatre and theatre-related activities. Level: Graduate

### **THTR 556 - Graduate Rendering Techniques. 2 Credits.**

Offered spring. Students will begin to develop personal design styles using both traditional and digital drawing and rendering techniques. Level: Graduate

### **THTR 557 - Graduate Scenic Painting. 3 Credits.**

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Introduction to the intermediate and advanced skills needed as a scenic artist. Emphasis on the varied materials and techniques used in the scenic studio, color mixing, and interpretation of the designer's work. Level: Graduate

### **THTR 560 - Graduate Light Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Advanced study of principles and practices of theatre lighting design, especially collaboration and communication. Training for position of light designer for theatre or lighting instructor. Design requirements and decisions, color, development of stage picture; thrust and arena theatre. Co-convenes with THTR 460. Level: Graduate

### **THTR 562 - Problems in Light Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in light design. Level: Graduate

### **THTR 565 - Graduate Sound Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Further advanced study of principles and practices of theatre sound design, especially script analysis and collaboration. Training for position of theatre sound designer or instructor. Principles, practices and equipment used to create sound and music designs for the theatre, dance and related areas. Co-convenes with THTR 465. Level: Graduate

### **THTR 567 - Problems in Sound Design. 3 Credits.**

(R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in sound design. Level: Graduate

### **THTR 570 - Graduate Stage Management. 2 Credits.**

Offered autumn. Prereq., consent of instr. Study of duties of stage manager in rehearsal and performance process. Includes stage managing a production for a faculty or guest-artist director. Level: Graduate

### **THTR 572 - Stage Management Practicum. 1-6 Credits.**

(R-18) Offered autumn and spring. Prereq., consent of instr. Practical work in stage management projects. Level: Graduate

### **THTR 574 - Problems in Theatre Management. 1-6 Credits.**

(R-18) Offered intermittently. Prereq., consent of instr. Level: Graduate

### **THTR 577 - Directing IV. 3 Credits.**

Offered autumn. Formalist styles of dramatic material. Through a variety of tools, textual and linguistic analysis, metrical and rhetorical analysis, archetypes, and musical structures, students analyze, interpret and stage projects drawn from opera and pre-modern drama, especially Shakespeare. Level: Graduate

### **THTR 578 - Directing V. 3 Credits.**

Offered spring. Exploration of image, time manipulation, and nonlinear storytelling. Level: Graduate

### **THTR 580 - Problems in Playwriting. 1-3 Credits.**

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(R-12) Offered intermittently. Development of specific advanced writing projects based on dramatic structure, conflict, tension, and character complexities/psychology. Level: Graduate

### **THTR 590 - Research. 1-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **THTR 591 - Special Topics. 1-18 Credits.**

(R-18) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **THTR 592 - Independent Study. 1-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **THTR 594 - Seminar. 1-3 Credits.**

(R-12) Offered intermittently. Prereq., consent of instr. A review and discussion of current research. Topics vary. Level: Graduate

### **THTR 595 - Practicum. 1-3 Credits.**

(R-12) Service learning experience in theatre in a setting compatible with the students major and interests. Level: Graduate

### **THTR 597 - Educational Methods. 1-6 Credits.**

(R-24) Offered autumn and spring. Prereq., consent of instr. Level: Graduate

### **THTR 598 - Internship. 2-6 Credits.**

(R-24) Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate

### **THTR 599 - Professional Paper. 1-4 Credits.**

(R-4) Offered autumn and spring. Preparation of a professional paper appropriate to the needs and objectives of the individual student. Level: Graduate

### **THTR 609 - Grad Design Project. 2 Credits.**

Students serve in one or more design roles of the production team for major theatre and dance events, working from conceptual stage to realized production. Level: Graduate

### **THTR 645 - Grad Design Seminar III. 2 Credits.**

Offered autumn. This course is designed to continue the design process skills developed in Seminar II of effective research, collaboration and script analysis methodologies and exploration practices. Level: Graduate

### **THTR 646 - Grad Design Seminar IV. 2 Credits.**

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Offered spring. This course is the capstone to the seminar sequence which completes the design process skills developed in Seminar I, II, and III of effective research, collaboration and script analysis methodologies and exploration practices. Level: Graduate

### **THTR 675 - Directing VI. 3 Credits.**

Offered autumn. The history and literature of directing. Level: Graduate

### **THTR 677 - Problems in Directing. 1-3 Credits.**

(R-18) Offered autumn and spring. Level: Graduate

### **THTR 690 - Research. 1-6 Credits.**

Offered autumn and spring. Prereq., consent of instr. An in-house project that takes the form of a capstone directing assignment or acting role in a School production. A paper detailing and reflecting upon the process accompanies the creative work. Level: Graduate

### **THTR 695 - Grad Final Creative Project. 1-6 Credits.**

Offered autumn and spring. Prereq., consent of instr. An in-house project that takes the form of a capstone directing assignment or acting role in a School production. A paper detailing and reflecting upon the process accompanies the creative work. Level: Graduate

### **THTR 698 - Internship. 1-6 Credits.**

### **THTR 699 - Thesis. 1-12 Credits.**

(R-12) Offered autumn and spring. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

## Welding (WLDG)

### **WLDG 101 - Welding Fundamentals of Auto Tech and Diesel. 2 Credits.**

Offered autumn. Offered at Missoula College. Basic and intermediate processes of shielded metal arc welding (SMAW) and oxyacetylene welding are covered in flat, horizontal, and vertical positions in a variety of joint configurations. Instruction in the oxyacetylene cutting process. This course is designed for Diesel students only.

### **WLDG 103 - Welding Fundamentals of Construction Trades. 2 Credits.**

Offered spring. Offered at Missoula College. Basic welding processes of shielded metal arc welding (SMAW), flux core arc welding (FCAW) are covered in the flat, horizontal, and vertical positions in a variety of joint configurations. The instruction in flux core arc welding is focused on the carpentry building trades. Instruction in the oxyacetylene cutting process is also provided. Safe operation of equipment is covered and work is evaluated to industrial standards.

### **WLDG 117 - Blueprint Reading & Welding Symbols. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 150. Practical experience in reading and drawing orthographic projections, interpreting dimensions, notes, scales, and welding symbols. Isometric projection (pictorial), sections, and auxiliary views with practical experience using conventional drafting tools and computer aided drafting (CAD).

### **WLDG 145 - Fabrication Basics. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 180; coreq., WLDG 117, 187. Conception, design, and construction of a metal structure to industry standards using shears, presses, and other machine tools common to the welding industry. Skills are developed in the areas of shielded metal arc welding and flux core arc welding, oxyacetylene cutting, plasma arc cutting, and air carbon arc cutting.

### **WLDG 150 - Welding Layout Techniques. 2 Credits.**

Offered autumn. Offered at Missoula College. Using practical layout techniques students develop basics for blueprint construction, layout on pipe and structural steel, and use of tools common to material layout.

### **WLDG 180 - Shielded Metal Arc Welding. 4 Credits.**

Offered autumn. Offered at Missoula College. Theory and safe operation of shielded metal arc welding (SMAW) of carbon steel on plate and structural components in all positions to industry standards. Visual inspection and destructive testing used to determine acceptability based upon industry standards (American Welding Society Structural Welding Code-Steel). Power sources and electrodes are covered in depth. Materials are prepared using mechanical plate shears and thermal cutting techniques. Thermal cutting techniques are examined relative to theory of operation and safe practices. Processes used are oxy-fuel cutting, plasma arc cutting, and air carbon arc cutting. Theory and operation of oxyacetylene welding examined.

### **WLDG 184 - OSHA Rules & Regulations: Welding. 1 Credit.**

Offered spring. Offered at Missoula College. Study of the Occupational Safety and Health Administration rules and regulations that affect the welding and construction industries.

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### **WLDG 187 - Flux Core Arc Welding. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 180. Theory, practice, and safe operation of flux core arc welding equipment. Coupons are welded in the flat, horizontal, and vertical positions to industry standards using a variety of welding electrodes, diameters, and power sources, which prepare students for welding qualification to the American Welding Society Structural Welding Code specifications.

### **WLDG 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WLDG 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

### **WLDG 198 - Internship. 1-6 Credits.**

### **WLDG 205 - Applied Metallurgy. 4 Credits.**

Offered autumn. Offered at Missoula College. Covers the manufacturing of iron and steel. Examination of physical and mechanical properties. Phase changes with the application of heating and cooling cycles. Ferrous crystal types and properties. Suggested welding procedures for low, medium, and high carbon steels, alloy steels, and cast iron.

### **WLDG 210 - Pipe Welding - Integrated Lab. 4 Credits.**

Offered autumn and spring. Offered at Missoula College. Prereq., WLDG 180; coreq., WLDG 215. Emphasis on skill development in the welding of pipe sections to extremely high quality levels as required by national codes and standards. Pipe welding using GTAW for the root pass and SMAW for the remaining passes in all positions. Visual inspection and destructive testing used to evaluate work according to industry standards. Students will be able to attempt welding qualification test as to code procedure set from American Welding Society ?D1.1 Structural Welding Code-Steel. This test will certify them to a determined process on carbon steel from prequalified variables.

### **WLDG 215 - GTAW (integrated lab). 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., WLDG 180, 187, and 210. The theory and safe operation of Gas Tungsten Arc Welding (GTAW). Examination of power source controls and operation along with associated consumables such as gasses, electrode filler materials for carbon steel, stainless steel, and aluminum. Welding skill development according to industry standards using these materials in the flat, horizontal, and vertical positions.

### **WLDG 245 - Metal Fabrication Design and Construction. 4 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 117, 180, 187, 215, 275. Students combine all knowledge and skills developed in the welding program to design and draw a full set of plans (blueprints) for an instructor-approved project using extensive welding, metal fabrication equipment, machining processes and automation. High quality performance, consistent with business and industry required.

### **WLDG 275 - Gas Metal Arc Welding. 4 Credits.**

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Offered spring. Offered at Missoula College. Prereq., WLDG 187. Theory and safe operation of Gas Metal Arc Welding (GMAW). Theory of flux core arc welding applied to GMAW. Primary focus on application, practical skill development, and producing welds that meet industry standards. Metals welded are low carbon steel, stainless steel, and aluminum. Short circuit arc and spray arc transfer used. Examination of gas and electrode selection.

### **WLDG 280 - Welding Testing Certification. 2 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 180, 187, 215, 275. Fundamental concepts and requirements of the American Society of Mechanical Engineers (ASME) and American Welding Society (AWS) are examined. Through laboratory experience students are provided the opportunity to qualify (certify) under the two codes mentioned above.

### **WLDG 285 - Automation in Welding. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., WLDG 117, 150, 187, 215. Application of the welding process to automation. Examination of simple automation techniques such as tools, clamping, and fixturing to aid in the rapid joining of production runs. Increasing complexity is examined leading into equipment that carries the welding gun, tractors, and carriages by fully automated systems with the student performing set-up and troubleshooting (Submerged Arc Welding) and automated parts processing (optical tracer torch). Programmable controllers are investigated and used. Programming and use of a PUMA 650 Industrial Robot.

### **WLDG 291 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.



## Women, Gender & Sexuality Studies (WGSS)

### **WGSS 150X - Women's Rights and Women's Roles Around the World. 3 Credits.**

Offered intermittently. This course offers an interdisciplinary perspective on women's participation in family, community, and political life around the world. This course will use a comparative approach to familiarize students with multiple societies in the Americas, Europe, Africa, Asia, and Australia and examine transnational themes that range across time and place. Guest lectures, field trips, and films will expose students to different approaches to the study of women's lives, work, and activism and to the range of women's activities around the world. In the second part of the course, students will collaborate on further research and design a final project presentation.

Gen Ed Attributes: Cultural Intl Diversity (X)

### **WGSS 163L - History and Literature: Perspectives of Women. 3 Credits.**

Offered autumn. Formerly PHL 151H, LS 119H, WGS 119H, WGS 163H. This is an introduction to the discipline and scope of Western thought from antiquity to the present focusing on women as the subject rather than men. The objective of the course is to provide an understanding and critical appreciation of seminal texts by and about women through readings, class discussion and written assignments.

Gen Ed Attributes: Lit & Artistic Studies (L)

### **WGSS 191 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WGSS 250 - Media Representations of Women, Men, and Sexuality. 3 Credits.**

Offered autumn in even-numbered years. This course is designed as a survey introduction to a variety of issues related to gender and sexuality in the mass media and pop culture. The goal of the course is to familiarize students with the breadth of these issues while at the same time providing them tools to critically analyze and engage with modern media. The course focuses largely on mass mediated forms such as television, film, music, sports, news, advertising and new media. An underlying understanding within the course is a recognition of the inextricable interconnections between gender, race, ethnicity, class, sexual orientation and so forth. Therefore, the course is invested in exploring the ways in which differences in identity produce different mediated representations and experiences of media. The course is comprised of class discussions based on readings, class presentations, and viewing and interpreting various mediated texts and documentaries. The course readings are both practical and theoretical, and while many of them focus on specific case studies, they are intended to provoke thoughtfulness in each student such that it can be applied to a variety of media.

### **WGSS 263S - Social and Political Perspectives on Gender and Sexuality. 3 Credits.**

Offered autumn. The course is designed to introduce students to the broad fields of women's, gender, and sexuality studies through an overview of a number of the theoretical and experiential perspectives of WGSS from a social science perspective. Students will analyze the history of feminism, women's studies, gender studies, and the growing field of queer studies; biological and psychological theories of gender; the social construction of gender as a product of history and culture; the relationship between gender and other

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categories of difference (race, sexual orientation, class, ethnicity); family and work; gender-based violence; the relationship between politics, economics, and gender; the representation of gender in popular culture; health and reproduction; and activism.

Gen Ed Attributes: Social Sciences Course (S)

### **WGSS 291 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WGSS 294 - Seminar. 1-6 Credits.**

(R-6) Offered intermittently. A review and discussion of current research. Topics vary.

### **WGSS 363 - Feminist Theory and Methods. 3 Credits.**

Offered spring. Prereq., WRIT 101 or equivalent, and one intermediate writing course. In-depth exposure to feminist views and critique of the ethics and methods of scientific, social, and literary inquiry. Includes exposure to primary sources and current societal and global issues and movements, research finding, and literature exemplifying these methods of inquiry and the gendered dimensions of such inquiry. Gen Ed Attributes: Writing Course-Advanced.

### **WGSS 378 - LGBTQ Studies. 3 Credits.**

Offered autumn. This course examines issues, questions, and interdisciplinary approaches that characterize the field of lesbian/gay/bisexual/trans/queer (LGBTQ) studies. It explores the formation of LGBTQ politics and cultures in the United States, theories of sexual and gender diversity, and sexuality and sexual identity as key categories for understanding knowledge and the self.

### **WGSS 390 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered intermittently. Directed individual research and study appropriate to the back ground and objectives of the student.

### **WGSS 391 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WGSS 392 - Independent Study. 1-12 Credits.**

(R-12) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **WGSS 398 - Coop Education/Internship. 1-6 Credits.**

R-6) Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **WGSS 423 - Medieval Women Authors. 3 Credits.**

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Offered every third year, spring. This course will examine writings by, for, and about (but mostly by) women in the European Middle Ages and the Early Modern period with a focus on secular and religious authors from the twelfth through the fifteenth centuries. We will explore how medieval and early modern female authors found their voices and constructed alternative discourses of gender, religion, and sexuality against the dominant medieval vision of woman as Bride of Christ or Devil's Gateway. Level: Undergraduate-Graduate.

### **WGSS 433 - African and Caribbean Women Authors. 3 Credits.**

Offered every odd numbered spring. Course explores the writings of authors who identify as women across francophone Africa and the Caribbean through postcolonial, feminist, and queer perspectives. Students can choose to complete readings and assignments in French or English. This class will expose students to the writings of African and Caribbean francophone women authors and centering their experiences in the globalized and postcolonial contexts of today. Level: Undergraduate-Graduate.

### **WGSS 463 - WGS Capstone. 2 Credits.**

Offered spring. Capstone course for the Women's and Gender Studies majors and minors.

### **WGSS 490 - Undergraduate Research. 1-6 Credits.**

(R-6) Offered intermittently. Directed individual research and study appropriate to the background and objectives of the student.

### **WGSS 491 - Special Topics. 1-6 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WGSS 492 - Independent Study. 1-9 Credits.**

(R-9) Offered intermittently. Course material appropriate to the needs and objectives of the individual student.

### **WGSS 494 - Seminar Women & Gender Studs. 3 Credits.**

### **WGSS 594 - Graduate Seminar. 3 Credits.**

### **WGSS 595 - Special Topics. 1-12 Credits.**

(R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **WGSS 596 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

### **WGSS 598 - Internship. 1-6 Credits.**

(R-6) Offered by special arrangement. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Level: Graduate

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**WGSS 695 - Special Topics. 1-12 Credits.**

## World Languages & Cultures (WLC)

### **WLC 110 - Introduction to European Studies. 3 Credits.**

This course offers an introduction to key concepts and themes of European Studies. It examines the phenomenon of Europe as a geographic region as well as an historical cultural construct.

### **WLC 381 - Madness in Literature and Cinema. 3 Credits.**

(R-6) This course investigates that place where literature and madness overlap in a variety of poetry, novels, short stories, and historical texts in three distinct European traditions: Spanish, French and Russian. The class follows different lines of thought such as the differences between madness and eccentricity, the connection between madness and ingenuity, and the allegorization of the creative process through depictions of madness. Only repeatable if the topic changes.

### **WLC 382 - Environmental Humanities: World Perspectives. 3 Credits.**

This course offers a comparative examination of the role of nature and the environment in different cultural traditions with a focus on three in particular: Japanese, German, and Russian. Students learn about such topics as national geographies and natural resources, folk beliefs and traditions related to nature and the environment, persisting relevant cultural values, and the effects of industrialization along with contemporary issues that will connect our attention to the current day.

### **WLC 410 - Methods Teaching Foreign Language. 3 Credits.**

Fundamental concepts, objectives, and techniques in the teaching of foreign languages.

### **WLC 492 - Independent Study. 1-6 Credits.**

(R-12) Course material appropriate to the needs and objectives of the individual student.

## Writing (WRIT)

### **WRIT 095 - Developmental Writing. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., placement or referral by WRIT 101 instructor. Designed for students who need instruction and practice integrating critical thinking, reading and writing before entering the required first-year writing course. Emphasis on invention, drafting, and revision. Grading A-F or NC (no credit). Credit does not count toward Associate of Arts or Baccalaureate degrees.

### **WRIT 101 - College Writing I. 3 Credits.**

UM: Offered every term. Prereq., WRIT 095 or proof of passing score on writing diagnostic examination, ACT English, 22-27, ACT Combined English/Writing 18-31, ACT Writing subscore 7-10, SAT Writing Score 440-690, SAT Essay subscore 7-10, ACT Writing subject score 19-32, ACT English Language Arts (ELA) score 18-31, SAT Writ/Language Test score 25-36. Emphasis on rhetorical understanding, textual analysis, and genre flexibility. Grading A-F, or NC (no credit). \*\*\*\*\* Missoula College description for this course: Offered every term. Prereq., WRIT 095 or proof of passing score on writing diagnostic examination, ACT English, 22-27, ACT Combined English/Writing 18-31, ACT Writing subscore 7-10, SAT Writing Score 440-690, SAT Essay subscore 7-10, ACT Writing subject score 19-32, ACT English Language Arts (ELA) score 18-31, SAT Writ/Language Test score 25-36., WRIT 095 or proof of appropriate SAT/ACT essay, English/Writing, writing section scores, appropriate MUSWA scores, or proof of passing scores on Writing Placement Exam). Expository prose and research paper; emphasis on structure, argument, development of ideas, clarity, style, and diction. Students expected to write without major faults in grammar or usage. Grading A-F, or NC (no credit). Co-Requisite Support sections of WRIT 101 are 4 credits; they are offered Autumn and Spring. Placement is based on UM Writing Placement Assessment score, ACT Combined English/Writing <18, ACT Writing subscore <7, SAT Writing Score <440, SAT Essay subscore <7, ACT Writing subject score <19, ACT English Language Arts (ELA) score <18, SAT Writ/Language Test score <25, or referral by WRIT 101 instructor. Designed for students who need additional instruction, support, and practice integrating critical thinking, reading and writing.

Gen Ed Attributes: Writing Course-Introductory

### **WRIT 121 - Introduction to Technical Writing. 3 Credits.**

Offered every term. Offered at Missoula College. Prereq., WRIT 101 (or higher) or equivalent or proof of appropriate SAT/ACT essay, English/Writing, writing section scores, appropriate MUSWA scores, or proof of passing scores on Writing Placement Exam. Introduction to technical writing situations that integrate text, design, and graphics. Emphasis is on evidence-based, informative writing that uses design and graphics to visually represent logic and organization. Course focuses on writing as a process and includes student self-assessment. Major assignments include a pure technical document, exploration of credibility, and public science writing. Students are expected to write without major faults in grammar or usage and to have basic computer literacy.

Gen Ed Attributes: Writing Course-Intermediate

### **WRIT 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WRIT 192 - Independent Study. 1-6 Credits.**

## University Of Montana

(R-6) Offered intermittently. Offered at Missoula College.

### **WRIT 198 - Cooperative Education Experience. 1-12 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **WRIT 201 - College Writing II. 3 Credits.**

Offered autumn and spring. Prereq., placement or C or better in WRIT 101, ACT Combined English/Writing 32-36, ACT Writing subscore 11-12, SAT Writing Score 700-800, SAT Essay subscore 11-12, ACT Writing subject score 33 or higher, ACT English Language Arts (ELA) score 32 or higher, SAT Writ/Language Test score 37 or higher. Offers instruction in rhetorical reading and writing, particularly the study and practice of written argumentation in different academic and civic contexts.

Gen Ed Attributes: Writing Course-Intermediate, Writing Course-Introductory

### **WRIT 325 - Science Writing. 3 Credits.**

Offered spring. Prereq., WRIT 101 (or higher) or equivalent and sophomore standing. Discussion of different types of science writing and focus on methods to achieve more fluent prose. Includes material on logic, inference, and developing arguments that rely on data.

Gen Ed Attributes: Writing Course-Intermediate

### **WRIT 391 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WRIT 398 - Cooperative Education Experience. 1-12 Credits.**

Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

### **WRIT 491 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### **WRIT 492 - Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and chair, and junior or senior standing. Special projects in expository writing. Only one 496 may be taken per semester.

### **WRIT 540 - Teaching College Level Composition. 3 Credits.**

Offered autumn. Restricted to graduate students teaching expository writing at The University of Montana. Theory and pedagogy of teaching college composition are emphasized. Level: Graduate

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### **WRIT 595 - Special Topics. 1-9 Credits.**

(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

### **WRIT 596 - Grad Independent Study. 1-3 Credits.**

(R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in expository writing. Only one 596 may be taken per semester. Level: Graduate



## Expenses, Services, Organizations

- Expenses
- Organizations
- Services

## Expenses < University of Montana

### Expenses

#### General

The student expense information provided in this catalog is based upon the rates for the 2017-18 academic year as submitted to and approved by The Montana Board of Regents of the Montana University System. The Board of Regents reserves the right to adjust fees at any time. Current information may be obtained by contacting Business Services by mail at

Business Services  
Lommasson Center  
University of Montana-Missoula  
Missoula, Montana 59812  
by phone at 406-243-2223  
or by visiting the Business Services website.

#### Paying the Registration Bill

A student's registration is not complete until it is "paid." Paying the registration bill confirms registration of the courses listed on the registration bill and the student's acceptance of the associated tuition and fee charges. **Even if financial aid and/or scholarships cover the full cost of the registration bill, all students are required to complete their registration by clicking the Pay Registration Bill button in CyberBear. FAILURE TO PAY THE REGISTRATION BILL WILL RESULT IN THE CANCELLATION OF CLASSES FOR THE SEMESTER.** Please see the published payment deadlines on the Registrar's Calendar web page.

Foreign and Canadian checks are not accepted. Credit card payment is accepted using VISA and MasterCard. Payment may be completed electronically via the student's CyberBear account. Payments can be made online via CyberBear:

- E-check
- Credit or debit card

Payment may be mailed to:

University of Montana  
Business Services  
32 Campus Drive  
Missoula, MT 59812

All payments received in the mail should include the student's UM ID number and must be received on or before the published payment deadlines which can be found at the Registrar's Calendar web page.

#### Tuition and Mandatory Fee Schedules

The tuition and mandatory fee schedules are posted on the Business Services Tuition and Fees web page. Different fee schedules apply to each type of student:

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- Undergraduate and Post-Baccalaureate,
- Missoula College,
- Graduate,
- Graduate TA/RA,
- Law Fall & Spring,
- WUE Undergraduate,
- Online Undergraduate and Post-Baccalaureate,
- Online Missoula College,
- Online Graduate.

The full schedule of fees and fee definitions are available at Business Services Tuition and Fees web page or by calling Business Services at 406-243-2223. Students enrolled at 12 or more credits are assessed at the same rate. Students who are enrolled less than 12 credits are assessed per credit. Students enrolled for 6 credits or fewer have the option of paying an additional amount to cover the ASUM activity fee, campus recreation fee, health service fee, and athletic fee.

An online learning fee is assessed on all online courses to partially defray costs associated with courses delivered online over the World Wide Web. Online courses are assessed an additional fee of \$48.00 per credit. If a student is registered for all online classes, they have the option to request a change to a distance only student. Students enrolled in all online courses for a term are not assessed some of the mandatory fees that apply to students enrolled in face-to-face courses. The student needs to complete the Distance Only Change of Status form which can be found on the UM Online website.

Montana resident high school eligible students may enroll in Early to College courses through the UM-Missoula College campus. The tuition rate is 50% of the resident Missoula College two-year tuition rate. Mandatory and non-mandatory fees are not assessed except for applicable course fees. Early to College students are not eligible to elect campus services such as the student insurance, Campus Recreation Center, Athletic fee, AUSM fee, and Campus Health Service (may not be all-inclusive).

Audited courses are assessed at the same tuition and fees as courses taken for credit or no-credit.

### **Delivery of Student Credit Balance Refunds**

The University of Montana processes all student credit balance refunds. Refunds are delivered based on the option the student has selected as explained at the Business Services Refund web page. The student needs to select an option only once unless they change or close their bank account or wish to change their option. If the student does not select an option, a check will be sent to their current mailing address. Even if a student does not expect to receive refunds due to financial aid, it is still important to select an option. For instance, a student may have a credit balance if classes are dropped or they withdraw within the first 15 class days, that would create a credit balance refund.

### **Additional Course Fees**

The Board of Regents may approve additional course fees at any time. Additional course fees frequently are assessed for selected courses in subjects such as: Accounting Technology, Art, Biology, Biochemistry, Building Maintenance Engineering, Business, Chemistry, Computer Technology, Culinary Arts, Curriculum and Instruction, Dance, Diesel Equipment Technology, Drama, Educational Leadership, Electronics Technology, Forestry, Geology, Health and Human Performance, Heavy Equipment Operation, Journalism, Legal Studies, Mathematics, Metals Processes, Microbiology, Military Science, Music, Nursing, Pharmacy, Physical Therapy,

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Resource Conservation, Respiratory Therapy, Science, Secretarial Technology, Small Engines, Surgical Technology, Truck, Welding, and Wildlife Biology. This listing may not be all-inclusive and does not preclude a specific fee from being assessed. The current report on Non-Mandatory Fees can be found on the Business Services Tuition and Fees web page.

Special fees are assessed for extended field trips in various departments.

- An Educational Service Fee is charged for the off-campus M.B.A. and M.P.A. programs.
- A fee is charged for cooperative education internships.
- Purchase of supplies, equipment, or tools may be required by certain programs.

Certain programs will also have an additional program tuition added based on the major in which a student is admitted. The programs listed may not be all inclusive and they are Foreign and Conservation Program, Law Program, Masters in Athletic Training Program, Medical Technology Internship Program, Pharmacy Program, Physical Therapy Program, Public Health Program, School of Business Program, Social Work Program and Wildlife Biology Program.

### Law School Fees

The proposed 2014-15 School of Law fees for 15 credits are approximately \$3,237 for autumn and \$3,212 for spring for an in-state student and \$11,175 for autumn and \$11,150 for spring for an out-of-state student. The Health Service fee is included. Health insurance coverage is available to students for an additional charge.

### Law Special Fees

All persons who apply for admission to the School of Law must pay an acceptance fee of \$300.00 (\$150.00 is refundable if written notice is received by the due date if student does not want to attend), which is applied toward payment of fees upon entering and attending the School of Law in the semester for which the application was made.

In addition to the above fees, Law School students must pay an additional \$145.00 per credit per semester. The amount is applied to instructional costs.

All law students are assessed a \$25.00 law activity fee during autumn. An additional Academic Facilities fee of \$50 per semester plus \$1.25 per credit hour is also assessed.

### School of Extended and Life Long Learning (SELL)

Fees, room and board costs for SELL summer programs, and fees for registration in SELL continuing education are contained in separate publications. These publications can be obtained by contacting the School of Extended and Lifelong Learning and Summer Programs

- by phone at 406-243-2900;
- by mail at University of Montana-Missoula, Missoula, MT 59812; or
- by visiting the School for Extended and Lifelong Learning website.

### Refund Policy

#### Refund for Dropped Classes

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Students who have paid their registration bill may drop classes through the first fifteen days of the Fall and Spring semesters. Adjustments of the associated tuition & fees and financial aid will be made to their student account during that time. **Beginning with the sixteenth class day, there is no refund for classes dropped, and there is a \$10 fee for each class dropped.** Students who finalized with financial aid should always check with the Financial Aid Office and Business Services before dropping classes to make sure they fully understand the financial impacts of dropping classes as that may result in the student having to immediately repay grant aid they received or make them ineligible to receive aid that has not been disbursed yet.

### Refund for Withdrawal from the University

If a student decides to withdraw from classes or has ceased to attend classes after paying their registration bill, the student should contact the University of Montana Registrar's Office located in the Lommasson Center, and complete an Official Withdrawal form to begin the official withdrawal process. This procedure will enable the University to prorate the tuition and fees assessed based upon the date of withdrawal. A percentage-based refund of tuition and fees does occur when a student officially withdraws before the first day of classes or within the first 15 class days of each term. Students ceasing to attend classes who do not complete an Official Withdrawal form and as a result do not receive any passing grades for the semester will be considered an unofficial withdrawal and will not receive any consideration for refund of tuition and fees.

*Students who desire to continue the Blue Cross Health Insurance must contact the Curry Health Center prior to withdrawal within the first 15 class days. Otherwise, the insurance premiums will automatically be refunded and coverage will be lost upon the date of their withdrawal.*

For students receiving federal financial aid, they must be attending classes to remain eligible for the federal financial aid they have received or could be eligible to receive. If a student drops courses, stops attending classes (Unofficial Withdrawal), never starts attending a class, or officially withdraws from the University of Montana by completing and submitting the Official Withdrawal form, the University may be required to return federal funds awarded to the student. **It is very important for students receiving federal financial aid to contact Business Services at (406) 243-2223 PRIOR to completing the official withdrawal process or if they are not going to continue to attend their classes.** If a student officially withdraws during the first fifteen days of class, the tuition and fees will be re-assessed for the semester based upon the official date of withdrawal. If a student does not complete the Official Withdrawal form and ceases attending and receives no passing grades for the semester the student is an Unofficial Withdrawal.

Students who withdraw from the University after paying their registration bill will receive pro-rated assessment of tuition and fees according to the following schedule. The Summer term is also subject to a pro-rated assessment of tuition and fees based on the length of each of the sessions within a Summer term.

### Refund for Fall and Spring:

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	<b>BEFORE CLASSES BEGIN</b>	<b>1ST WEEK</b>	<b>2ND WEEK</b>	<b>3RD WEEK</b>	<b>4TH WEEK OR LATER</b>
<b>Registration</b>	none	none	none	none	none
<b>Tuition/Fees</b>	100%	90%	75%	50%	none
<b>Blue Cross Ins. **</b>	100%	100%	100%	100%	none
<b>Other Fees</b>	varies	varies	varies	varies	varies

### Refund

Charges for room and board will be re-assessed on a pro-rated basis. During the final two weeks of the semester, room charges will not be re-assessed. Student who do not formally and completely withdraw are not eligible for a refund. The student will need to contact both the Residence Life Office located at 101 Turner Hall and UM Dining located on the first floor of the Lommasson Center.

The University of Montana will reassess the tuition and fees for students using the Deferred Payment Plan if the student officially withdraws during the first fifteen days of a semester. The student may still owe a balance to the University.

A student who has officially withdrawn from the term may petition for Hardship consideration if a student meets one of the following conditions or events:

- experiences a catastrophic or life threatening condition or event AFTER THE 15<sup>TH</sup> CLASS DAY of the semester that prevents the student from completing the term;
- has unexpectedly been called to Active Military Duty/Training and cannot complete the term; OR
- cannot complete the term because of an institutional caused circumstance or event.

Appropriate documentation is required to support the Hardship. Hardship Petitions will need to be filed within 30 days of the end of term for which the Hardship is being requested unless there are substantial mitigating circumstances preventing the timely submission of the Hardship Petition. The Hardship Petition can be obtained by contacting Business Services at (406) 243-2223 during normal business hours, Monday Friday, 8:00 a.m. 5:00 p.m. and excluding office closures for holidays.

## Return of Title IV Funds (Federal Financial Aid)

The University of Montana Refund Policy exists for calculating the amount of the federal financial aid that is subject to return when a student officially or unofficially withdraws on or before the 60% point of the term for which the aid was or could have been disbursed. The federal Return of Title IV Funds formula dictates the amount of Federal Title IV aid that must be returned to the federal government by the University and the student. The federal formula is applicable to a student receiving Title IV Funds if that student officially or unofficially withdraws. The University of Montana is required to return the Title IV funds to the federal government, U.S. Department of Education, within 45 days of determining the student is no longer attending. A student's official or unofficial withdrawal date is determined by:

- the date the student began the institution's withdrawal process or officially notified the institution of intent to withdraw;
- the midpoint of the period for a student who leaves without notifying the institution (unofficial);
- or, the last date of attendance by the student at a documented academically related activity.

The federal formula requires a return of Title IV aid if the student received federal financial assistance in the form of a Federal Pell Grant, TEACH Grant, Iraq/Afghanistan Service Grant, Federal Supplemental Educational Opportunity Grant (SEOG), Federal Perkins Loan, Federal Direct Loan (subsidized or

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unsubsidized), or Federal Parent or Graduate PLUS loans for students who officially or unofficially withdraw on or before completing 60% of the semester. The percentage of Title IV aid to be returned is equal to the number of calendar days remaining in the semester (based on the official withdrawal date) divided by the number of calendar days in the semester (scheduled academic breaks of five consecutive days or more are excluded). After all Title IV aid return requirements have been satisfied, any credit balances on a student's account will be first applied to satisfy outstanding University tuition, fees, and institutional charges, then to any Grant overpayments and finally any remaining credit balances will then be refunded to the student.

*If you officially or unofficially withdraw from the University of Montana before completing 60% of the semester, you may have to repay any unearned financial aid funds that were already disbursed to you. A post-withdrawal disbursement may be made if a student shows eligibility for Title IV aid. Please contact staff in The University's Business Services, located in Griz Central or call 406-243-2223, if you have any questions about refund of tuition and fees or the calculation of the return of federal financial aid PRIOR TO WITHDRAWING OR CEASING TO ATTEND.*

### Distribution Priority for Return of Title IV Funds

1. Federal Unsubsidized Stafford Loan
2. Federal Subsidized Stafford Loan
3. Federal Perkins Loan
4. Federal Graduate PLUS Loan
5. Federal Parent PLUS Loan
6. Federal Pell Grant Program
7. Federal SEOG Program
8. Federal TEACH Grant
9. Federal Iraq/Afghanistan Service Grant
10. State, Private, or Institutional Aid
11. The Student

### Other Costs and Policies

#### Late Registration

A student who does not complete registration, including payment of tuition & fees, by the seventh class day is assessed a late registration fee of \$80.00. An additional late registration fee is assessed on the 16th class day if the registration bill is not paid. After the fifteenth class day, a petition is required to register and, if approved, the total late registration fee of \$160.00 is assessed.

#### Returned Checks

A charge of \$25.00 will be assessed on checks (paper or electronic) returned from the bank. Any paper or electronic check tendered in payment of registration fees and not honored by the bank upon which it is drawn may result in cancellation of a student's registration. If the student's registration is cancelled, the student will be required to re-register and may be subject to the late registration fees in addition to the \$25.00 service charge.

#### Fee Policy on Drop/Adds

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Students must pay for all courses for which they are enrolled upon assessment of their registration bill. However, within the first fifteen class days, they may drop or add courses. The courses for which students are enrolled on the fifteenth class day will determine any fee adjustments (see fee schedule) or financial aid adjustments. Beginning the sixteenth class day, courses dropped will not result in a reduction of fees but courses added that increase credit hour enrollment may result in additional tuition and fees charges. Payment is due within 10 days of the day courses are added.

***CyberBear will not allow a student to drop all courses. Dropping all courses is considered a withdrawal from the University. Please refer to the Withdrawal Policy section in the catalog for information on how to withdraw and the associated Refund Policy.***

### Drop/Add Processing Fee

A \$10.00 processing fee will be charged for each course that is added or dropped after the fifteenth instructional day. See the summer class schedule for summer session deadlines.

### Deferred Payment Plan

The University of Montana offers a payment plan to help students and their families pay their tuition, mandatory fees, and room and board. Eligibility is based on the following criteria:

- Making payments as scheduled.
- Existing credit history with the University.
- Full completion, approval and signing all required documents.

The plan provides for the payment of at least one fourth of the total fees along with a \$30.00 administrative charge at the time of the registration bill assessment.

The remaining three payments are due as follows:

Fall Term October 1, November 1 and December 1

Spring Term March 1, April 1 and May 1

If the first falls on a weekend or a holiday, the payment is due on the next business day. A \$15.50 fee will be assessed each time a payment is late.

Registration, tuition and mandatory fees less any Financial Aid may be deferred. Student insurance and non-mandatory/course fees may not be deferred. A \$15.00 fee will be assessed each time a payment is late.

Deferred Payment Plan (DPP) applications are to be submitted via CyberBear. The instructions (at right) will lead you to the DPP application. Be prepared to fill out the necessary application forms including parent and spouse information and two references. Your application will be reviewed by Business Services within three (3) business days and you will be notified via your UM email on the status of your application.

The signing and adherence to the terms and conditions of a promissory note will be required. Any person who is receiving financial aid that fully covers their tuition, mandatory fees and room and board; who owes the University any fees, fines, loans or other charges; or who has previously been approved for the Deferred Payment Plan and failed to make timely payments may be determined to be ineligible to use the Deferred Payment Plan.



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This plan is not available for the summer session.

### Monthly Bill Statements

Monthly bill statements are mailed on accounts that do not have an active UM email. An electronic notification will be e-mailed to the student's official University of Montana e-mail account. It is the student's responsibility to check their mail and official University of Montana e-mail account for these statements and notices. Payments for billed amounts are due by the due date indicated on the statements and electronic message. Failure to make timely payments will result in an interest charge not to exceed ten percent (10%) per annum assessed on balances not paid in full by the following monthly billing. Payments can be made

1. online in CyberBear;
2. at the cashier's station located in Griz Central (2nd floor Lommasson Center); or
3. by mailing payments to

Student Accounts  
Business Services  
The University of Montana  
32 Campus Drive #2304  
Missoula, MT 59812-2304.

### Non Payment

A student who owes regular fees and charges including room and board or has an overdue debt owed to the University for any fees, fines, or other charges will not be able to register, secure any transcript or record, or access any University facilities or services until the full amount due has been paid or satisfactorily resolved with Business Services. Interest may be charged at the rate of ten percent (10%) per annum (.027% per day) on the balance due from the day after the due date until the full amount has been paid. Student may also be subject to any attorney's fees or other costs or charges necessary for the collection of the amount owed may and this amount may be added to the balance due. The University of Montana also reserves the right to use the Montana State Department of Revenue to offset and receive any funds that may be refunded by the State of Montana to the student. The University of Montana reserves the right to refer unpaid accounts to third-party collection agents under contract with the University of Montana.

### Determination of In-State Fee Status

Please see the Residency Information website.

### Costs of On-Campus Services

#### Housing and Dining Services

Students living in UM Housing are required to contract for a meal plan with UM Dining. Room and board rates are the same for in-state and out-of-state students. Occupants may select any meal plan to obtain the number of meals preferred and choose from a variety of room options.

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Students who are approved to move out of the residence halls and terminate their meal plan contract will receive a prorated refund based upon the days remaining in the semester less the cancellation fee. For more information and charges, see the [UM Housing Office website](#) and [UM Dining website](#).

### **Vehicle Registration Fee**

All vehicles parking on campus must display current campus vehicle registration between the hours of 7:00 a.m. and 5:00 p.m. Monday through Friday year round. Students, staff or faculty may purchase window or hanger decals.

More information can be found at the [UM Police parking web page](#).

### **Veterans' Benefits for Education Assistance Under Public Law 95-202 and Public Law 815**

For Veteran information visit the [UM Veterans website](#).

## Financial Aid

Financial aid services are available in the Financial Aid Office, located on the second floor of the Lommasson Center Building .

Students specific information including the status of the student's aid application is available in CyberBear. General financial aid information including forms, policies and scholarship information is available at the Financial Aid Office website.

## All Students

Enrollment Services-Financial Aid  
Emma B. Lommasson Center, 32 Campus Drive  
Missoula, MT 59812-1254  
(406)243-5373  
Fax (406) 243-4930

The offices is fully accessible.

Notice: Any policy is subject to change without advance notice if required by federal or state law, Board of Regents, or Enrollment Services-Financial Aid Office.

## Acceptance to UM

Students must be accepted for admission (or readmission) to the University in a degree seeking program before financial aid requests are considered. Students accepted into non-degree categories are not eligible for any financial aid.

## Presidential Leadership Scholarships

This award is open to incoming freshmen who have demonstrated high academic achievements, leadership and promise for success through their high school experiences. The award is renewable for four years based on meeting eligibility requirements. The application is available from Enrollment Services-Admissions, the Davidson Honors College, and high school counselors in Montana. The application is also available on-line on the Davidson Honors College website. The application deadline is December 31.

## Campus-Wide Scholarships

The University offers a campus-wide scholarship program. Students should apply each year as most scholarships are awarded on an annual basis. Students holding a UM General renewable scholarship will have their awards automatically renewed if they continue to meet the eligibility criteria so need not submit an application again in subsequent years.

Requests for applications for continuing UM students, beginning November 1st, may be directed to the Enrollment Services-Financial Aid Office. The application is also located on line on the Financial Aid Office website. The filing deadline is February 1. Students are notified in March.

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New, incoming students who have applied for admission to UM by December 31 will be considered for any scholarships that may be applicable. Notification will be done in March.

The Western Undergraduate Exchange (WUE) scholarship may be available for applicants from participating states. Application for a WUE scholarship is accomplished by applying for admissions to UM. Contact Enrollment Services-Admissions for further information.

### Departmental Scholarships

Many departments, including the Missoula College, offer scholarships based on skill or academic potential. Students should contact their major departments for deadlines and more information.

### Financial Aid Application

All students who wish to receive any federal funds, including federal parent loans, need based or most non-need based assistance, must file the Free Application for Federal Student Aid (FAFSA). The application is available on the Federal Student Aid (FAFSA) website. Students whose FAFSAs are received and processed by the Department of Education by February 15, and who complete all other documentation requirements are given priority for limited funds. Those who complete requirements later are considered only for federal loan programs and federal Pell Grants.

### Determination of Eligibility

Eligibility for need-based financial aid is determined by subtracting the Expected Family Contribution (as determined from filing the FAFSA), scholarships, and other educational assistance from private or public agencies from the Cost of Attendance.

### Financial Aid Package

Packages of need-based aid can include a combination of grants, loans and work-study. Students using the FAFSA automatically apply for all possibilities with one application. The types of aid offered will include federal subsidized and unsubsidized student loans for graduate or undergraduate students and federal Pell Grants for undergraduates if qualified. For those who file the FAFSA early and complete all requirements for additional documentation promptly, additional campus aid will be considered. This aid includes federal and state grants for undergraduate students. Federal Perkins loans and either federal or state work study will be considered for all early filers for both degree-seeking undergraduates and graduate students.

Non-need based aid, in the form of unsubsidized federal loans, for students and parents of dependent students will be considered for those families who file the FAFSA and accept these loans.

### Distribution of Aid

All financial aid is awarded by the Enrollment Services-Financial Aid Office and distributed through Business Services, usually by crediting aid to the student's account. Aid is disbursed beginning the week before classes to students who have accepted their aid, submitted all required documents weeks in advance of the date and have finalized their registration in Cyberbear. Loans may be canceled under certain

## University Of Montana

conditions if the student no longer desires the debt. Students who are offered work study must obtain employment and complete additional paperwork at the Enrollment Services-Financial Aid Office. Students who work are paid bi-weekly based on the timecard submitted by students and the supervisors.

### **Additional Requirements for Loans**

In order to meet federal requirements, students who receive a federal student loan at the University of Montana must complete an entrance interview requirement and sign a promissory note before a loan will be disbursed. Instructions for entrance and exit counseling and the promissory notes are available on the Enrollment Services-Financial Aid Office website for the University of Montana-Missoula. Select the "Loans" link.

### **Study Abroad and Financial Aid**

Students who desire to study abroad and who enroll in courses that are approved by The University of Montana should contact the Enrollment Services-Financial Aid Office. Instructions will be provided for using financial aid with this type of study.

### **Other Requirements and Guidelines for Retaining Financial Aid**

Financial aid for full-time is based on maintaining a minimum of twelve (12) credits each term.

Students enrolled for less than full-time may receive financial aid. Most grants will be pro-rated based on credit load. Loans are not pro-rated but require a minimum of six credits.

Students enrolling for fewer than six credits are not considered for financial aid with two exceptions:

1. undergraduates who are seeking their first degree may be eligible for a reduced federal Pell Grant, and
2. tuition waivers may be available for those who qualify.

Students can only receive aid for credits that are required for their degree programs. If a student chooses to repeat a course for which they previously received a passing grade that course can only be counted toward their aid enrollment status one more time.

### **Employment**

The Enrollment Services-Financial Aid Office coordinates federal and state work study programs. Open positions are posted on the electronic job board located on the Career Services Student Employment web page.

Non-work study student employment positions are also posted electronically at Career Services Student Employment web page.

### **Satisfactory Progress**

## University Of Montana

Any student receiving financial aid is required to make satisfactory academic progress in a program leading to a degree. Students must maintain a minimum cumulative grade point average (GPA) and complete a minimum of 70% of all credits attempted. The minimum GPA for undergraduate, Law and Pharmacy students is a 2.0. Physical Therapy doctoral students need to maintain at least a 2.5 GPS. Graduate students need to maintain at least a 3.0 GPA.

A student must also be able to complete their degree within 150% of the length of their program measured in credits attempted. For instance, a student pursuing a 120 credit bachelor s degree would need to complete their degree prior to attempting 180 credits.

Complete information is available in the Enrollment Services-Financial Aid Office or at the Financial Aid Office website. Select the "Maintaining eligibility" link.

### Short Term Loans

Limited short term loan money may be available to registered students who are eligible and submit complete applications. Among other conditions the student must have pending financial aid that will result in a refund to the student to qualify for the loan.

### Tuition Waivers

The Montana Board of Regents has authorized the waiver of tuition for certain categories of students. Applications for any of the tuition waivers listed must be made in writing to the Enrollment Services-Financial Aid Office. The request must be made prior to the start of the semester in which students expect the waiver.

Minimum academic standards are necessary to receive tuition waivers. Other requirements and limitations may apply. Contact the Enrollment Services-Financial Aid Office for application forms or more information.

### Montana Veterans Tuition Waiver

- bonafide resident of the State of Montana for fee purposes
- Honorable Discharge
- at one time qualified for veterans benefits under Title 38 of the U.S. Code, but are no longer eligible
- served during a time of war as determined by the Attorney General (World War II, 12-7-41 to 9-2-45; Korean War, 6-22-50 to 1-31-55; Vietnam War, 1-1-64 to 5-7-75; or post-Vietnam world conflicts under certain conditions. Contact the Enrollment Services-Financial Aid Office for further information.)

### American Indian Student Tuition Waivers

- resident of the State of Montana for one year immediately prior to enrollment at The University of Montana-Missoula
- documentation proving at least one-quarter degree blood
- meet admissions guidelines of the University

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- must have financial need as determined by the Enrollment Services-Financial Aid Office
- meet satisfactory academic progress according to the standards of the Enrollment Services-Financial Aid Office

## Senior Citizens Tuition Waiver

- permanent resident of the State of Montana
- 65 years of age or older

## University of Montana Employees

- instate resident
- employed at least three-quarter time on the date of registration and for the entire semester
- must be after probationary employment period
- approval from department head & Human Resources every semester

## Montana University System Honors Scholarship

- awarded by Board of Regents to top graduating high school seniors in Montana
- student must submit form received from the Regents to The University of Montana Enrollment Services-Financial Aid Office for activation of this waiver

## Other

There are several other tuition waivers including war orphans, MUS employees' families, surviving dependents of a Montana National Guard Member, and surviving spouse or children of any Montana firefighter or peace officer killed in the line of duty. Contact the Enrollment Services-Financial Aid Office for details.

## Department of Military Science

All students are afforded the opportunity to apply for two, three and four year scholarships provided by Army ROTC. The scholarships pay for all mandatory tuition and fees, a monthly stipend and \$450.00 per semester for books. The monthly stipend for scholarship students is

- \$300.00 in the freshman year;
- \$350.00 in the sophomore year;
- \$450.00 in the junior year and
- \$500.00 in the senior year.

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Additional financial assistance opportunities are provided to students that are interested in joining the U.S. Army Reserve or the Montana State National Guard. These programs are referred to as the Simultaneous Membership Program, since the student is involved in the National Guard or Reserves at the same time they are involved in ROTC. These programs have financial benefits that range from \$15,000 for a two year program to \$50,000 for a four year program. These benefits are very complex and are best understood by stopping in to visit with the Military Science Enrollment Officer.

Students have the opportunity to enroll in both the basic and advance courses offered by the Department of Military Science in the College of Arts and Sciences. The Basic Course is simply the Freshman and sophomore level courses offered by Army ROTC Instructors and no financial benefits are received for enrolling unless the student is on a scholarship. The Advanced Course refers to our junior and senior level courses. All advanced course students are contracted and receive financial benefits. We welcome student involvement in Land Navigation and Drill and Conditioning courses but no benefits are provided for enrollment in these classes.



## Organizations < University of Montana

### Organizations

#### Alumni Association

The University of Montana Alumni Association, established in 1901 by Eloise Knowles, represents more than 85,000 graduates, former students, and friends around the world. The mission of the Association, with offices in Brantly Hall, is to "identify and serve the needs of this University, its alumni, students and friends." The Alumni Association sponsors and helps coordinate Homecoming, Charter Day, Distinguished Alumni awards, Senior Recognition Day, scholarships, internships, and commencement reunions. The Association also connects alumni with currently enrolled students who are exploring career options. Visit the Alumni website for more information.

#### Associated Students of the University of Montana (ASUM) Student Government

##### **Associated Students of the University of Montana (ASUM) Student Government**

The Associated Students of the University of Montana is the recognized representative body for both undergraduate and graduate students at the University of Montana. Through ASUM, UM students can voice their opinions and concerns, establish new programs and services for the benefit of all UM students, volunteer on a variety of influential committees, and fund almost 200 student groups on campus. As the only elected, legitimate voice for all UM students, the ASUM Senate meets weekly to discuss topics and find solutions to issues pertinent to students at UM. ASUM offers a variety of beneficial services to students that have paid the student activity fee, and works in the best interest of all UM students. For more information, please contact ASUM at 243-2451, check out the ASUM website, or stop by the ASUM office at UC 104.

##### **ASUM Child Care Preschool and Family Resources**

The ASUM Childcare Preschool and Family Resources operates five child care and early education centers. Child care is available to students, faculty, and staff. The centers are open for children 18 months to 6 years old. The program provides referrals to private residences providing child care for children ages new born to 12 years as well as a variety of family resources. For more information, please contact us at 243-2542, the ASUM Child Care Preschool and Family Resources website, or stop by the Child Care office at UC 119.

##### **ASUM Legal Services**

ASUM Legal Services provide limited, low-cost legal services to activity fee paying students at The University of Montana and Missoula College. For more information, please contact us at 243-6213, the ASUM Legal Services website, or stop by ASUM Legal at UC 112.

##### **ASUM Off-Campus Renter Center**

The Renter Center provides counseling for student renters experiencing issues with their landlord, encourages positive neighborhood relationships, assists students with finding housing, and advocates for renters. Additionally, the agency maintains the Off-Campus Housing Finder and a Rate Your Landlord Application located on the agency website. The Renter Center also runs the Neighborhood Ambassador Program, which works to improve the quality of life in the neighborhoods surrounding the UM campus by

## University Of Montana

bridging the communication gap between student renters and permanent residents. For more information, please contact us at 243-2017, the ASUM Off-Campus Renter Center website, or stop by the Off-Campus Renter Center at UC 118.

### **ASUM Transportation**

The ASUM Office of Transportation promotes and provides transportation options to the University of Montana campus community. Getting to campus and finding a parking space can be frustrating and expensive, and the Office of Transportation offers several convenient alternatives. The UDASH bus operates 3 daytime transit routes:

- from UM to ride lots and student housing at South Campus every 5-10 minutes (Red Line);
- between Missoula College and UM every 15 minutes (Blue Line); and
- between Russell and Wyoming Streets and UM via 5th and 6th Streets every 30 minutes (Purple Line).

UDASH also operates late night bus service between downtown, UM, and South Campus student housing with service every 15-30 minutes (Gold Line). The Office of Transportation also provides information and personalized trip planning for Mountain Line, Missoula's city bus. Both bus services are free and open to the public.

In addition to bus service, the Office of Transportation provides interest-free bike loans up to \$1,000 for 18 months, bike repair stations around campus, bike tune-up classes and events, and low-cost semester-long bike rentals. The office also operates the Yellow U Bike program offering free-two day bike checkouts through the Mansfield Library.

More information is available on the Office of Transportation website, by phone at 243-4599, or in person in UC 105.

### **ASUM Student Resolution Officer**

The Student Resolution Officer is your representative for handling student complaints against a faculty member or university administrator that cannot be resolved informally. The Student Resolution Office advocates for students in a three-step dispute resolution process. For more information, please contact the Resolution Officer at 406-243-5431, the ASUM Student Resolution Officer website, or stop by the ASUM office at UC 105.

### **ASUM Student Clubs and Organizations**

ASUM recognizes and offers funding for 200 student organizations and special interest clubs. Find out about a student group that interests you and the many benefits student groups receive by checking out the ASUM Student Groups website or stopping by the ASUM office at UC 105.

## **KBGA Radio**

KBGA College Radio, 89.9 FM, is the student-run, college radio station for The University of Montana. Also available streaming online on the KBGA Radio website, we provide a diverse format of music and talk programming 24 hours a day. We are a non-commercial, educational station, so everyone is welcome to become a DJ. For more information, please contact us at 243-6759, the KBGA Radio website, or stop by the KBGA office at UC 208.

## **Montana Kaimin**

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The Montana Kaimin is the University's student-run newspaper. Published since 1899, it has worked hard to serve, entertain, and inform students with issues that are important to them. Publication begins the first week of school and it is printed on Wednesdays during the fall and spring semesters. The Kaimin website is updated daily during fall and spring semesters. For more information and past editions, please contact us at (406) 243-6646, through the Montana Kaimin website, or at our offices in Don Anderson Hall, 208.

## UM Productions

UM Productions is a student-run/student-funded organization whose goal is to bring quality events to The University of Montana and the Missoula community. UM Productions strives to provide students with hands-on experiences and employment opportunities and bring concerts and events that are focused on diversity with a strong dedication to the arts. Check out our website for upcoming events and job opportunities. For more information please contact us at 243-4981, on the UM Productions website, or stop by the office at UC 104.

## Student Political Action Office

The Student Political Action office is a resource for students who have a desire to participate in the political process at the local, state and federal levels. Through a student committee, the SPA office works to represent student interests by working with City Council, the State Legislature and the Montana Delegation. For more information, please contact us at 243-2451, the Student Political Action Committee website, or stop by the ASUM office UC 105.

## Fraternities and Sororities

The Greek Community of The University of Montana provides a comprehensive educational, social, and living experience for members through the promotion of friendship, leadership, personal development, academics, and services to the University and the Missoula community. The Greek members donate their time and support to over 50 recognized philanthropies. Additionally, they involve themselves in a wide variety of campus leadership organizations, such as Residence Life Staff, PRO's, ASUM Senate, Advocates, Peer Advising, and Mortar Board.

The Greek system has six (6) national fraternities (Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Kappa Sigma and Sigma Phi Epsilon) and four national sororities (Alpha Phi, Delta Gamma, Kappa Alpha Theta and Kappa Kappa Gamma). Information about Greeks can be obtained in the Office of Greek Life (UC 209B), or by visiting the greek life website, or calling 243-2005.

## Peace Corps

Peace Corps service is a life-defining leadership experience. The Peace Corps is a 27-month commitment during which volunteers provide technical assistance in six program areas:

- education,
- agriculture,
- environment,
- health,
- youth and community development,

## University Of Montana

- business and information and communications technology.

Peace Corps volunteers live, learn, and work with a community in one of more than 70 countries overseas.

The Peace Corps Office provides support to students and community members interested in pursuing service with the United States Peace Corps. During walk-in hours and scheduled appointments, Returned Peace Corps Volunteers provide guidance about the application process, as well answer questions about their first-hand experiences living, learning and working with a community overseas. In addition, Peace Corps staff table on-campus and in the community, visit classrooms, and host information sessions, application workshops, and Returned Peace Corps Volunteer panels. For additional information, please visit the Peace Corps Campus Representative at 154 Lommasson Center, call (406) 243-2839, e-mail: [peacecorps@umontana.edu](mailto:peacecorps@umontana.edu) or visit the Peace Corps website.

# Community Services < University of Montana

## Community Services

### Bureau of Business and Economic Research

The Bureau of Business and Economic Research has been providing information about Montana's state and local economies for over 60 years and is proud to be the most comprehensive economic analysis center in the state.

House on the campus of The University of Montana-Missoula, the Bureau is the research and public service branch of the School of Business Administration. On an ongoing basis, the Bureau:

- analyzes local, state, and national economies
- provides annual income, employment and population forecasts
- conducts extensive research on forest products, manufacturing, health care and Montana Kids Count
- designs and conducts comprehensive survey research at its on-site call center
- presents annual economic outlook seminars in cities throughout Montana
- publishes the award-winning Montana Business Quarterly

### Montana Cooperative Wildlife Research Unit

The Montana Cooperative Wildlife Research Unit performs research designed to address the needs of cooperators, bridging the gap between applied and basic wildlife science. Our studies provide new insights useful to management and conservation, based on understanding the ecological mechanisms that underlie habitat requirements and demography of individual and coexisting wildlife species. Research emphases within the Unit include

- ecology and management of carnivores,
- applied landscape ecology,
- management of large game,
- interactions between forest management and wildlife,
- environmental influences (predators, habitat, ungulates) on demography and diversity of birds,
- habitat requirements and community ecology of birds, and
- comparative demography and life history strategies of birds in differing environmental and geographical contexts.

Other research topics are addressed as needed, in keeping with the Cooperative Research Program's mission to best meet the needs of the cooperators by remaining flexible and open to new areas of inquiry. When Cooperator's needs occur outside Unit expertise, the assistance of appropriate University faculty will be recruited.

Unit staff will advance the training and education of graduate students at the University of Montana by teaching up to one graduate-level course per year in wildlife science, chairing graduate committees of Unit students, and serving on graduate committees of non-Unit students. Technical support and training will be provided to Cooperators and other agencies as the need exists.

### Objectives of Coop Units

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- Conduct research into the ecology of renewable natural resources, and to investigate the production, utilization, management, protection, and restoration of such resources. This research will be relevant to the needs of the State, the geographical region, and the Nation.
- Provide technical and professional education on the graduate and professional levels, in the fields of renewable natural resource sciences.
- Make available to resource managers, land owners, other researchers, and other interested public, such facts, methods, literature, and new findings discovered through research.
- To disseminate research findings through the publication of reports, bulletins, circulars, films, and journal and magazine articles.

## Montana Campus Compact

The University of Montana is a member in good standing of The Montana Campus Compact. MTCC is a statewide coalition of college presidents and chancellors committed to renewing the public purposes of higher education by promoting campus-community collaborations and civic engagement activities. Since 1993, these campus leaders have represented two- and four-year, public, private, religiously affiliated, community, and tribal colleges across Montana. MTCC supports and encourages activities such as volunteering, community service, and service-learning through its programs, which include:

- MTCC Campus Corps
- Service-Learning Workshops and Faculty Development
- MTCC VISTA Project
- Compact Service Corps
- Montana Athletes in Service Award
- Careers in the Common Good Scholarship

For more information regarding MTCC member benefits and services, please contact the MTCC headquarters office at (406) 243-5177 or online at the Montana Campus Compact website. For MTCC services at UM, please contact the Office for Civic Engagement at (406) 243-5531 or see their listing under The Office For Civic Engagement.

## The Office for Civic Engagement

The Office for Civic Engagement (OCE) is honored to serve as The University of Montana's primary agent of community activism and civic responsibility. It is our mission to cultivate civic competency through curricular and community-based experiences. We accomplish this by collaborating to build networks of reciprocity and partnership between campus and community, engaging people in service to connect people to place to provide for engaged participation in a democratic society, and enriching student learning and scholarly pursuits. The OCE is a unit of the Davidson Honors College and operates as an affiliate of the statewide Montana Campus Compact (MTCC) organization (see separate listing). The OCE is located in the Davidson Honors College, room 015, and can be reached at (406) 243-5531 or the Office for Civic Engagement website.

### OCE Programs

- Student Volunteer Programs - Throughout the school year, OCE coordinates several community service programs for students to get actively involved in the community including Service Saturdays, Alternative Breaks, Adopt-A-Family and more. The OCE hosts the Volunteer Fair each semester to connect students with local nonprofit organizations and volunteer opportunities.

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- Pathways of Service Leadership Program - This new program is designed to develop students as leaders through an inclusive process that revolves around service as the vehicle for leadership development and social change in preparation for social impact careers after graduation.
- AmeriCorps\* VISTA - The OCE provides students and recent graduates with the opportunity to engage in national service.
- Nonprofit Administration Programs - The OCE facilitates the minor in nonprofit administration and the Nonprofit Leadership Alliance national certificate program in nonprofit administration. Both are degree enhancement programs designed to assist students to achieve skills and abilities in preparation for careers in the nonprofit sector. The OCE also coordinates the Online Professional Certificate Program in Nonprofit Administration, a series of short courses designed for busy professionals who want to hone their skills in specific areas such as grant writing, financial management and fund raising, and serves as the primary advising office for MPA students in the nonprofit administration track.
- Service Learning - Service learning is an innovative method of teaching and learning in which students, faculty, and community partners work together to enhance student learning by applying academic knowledge in a community-based setting. The OCE works with faculty and departments to create meaningful service learning partnerships with community organizations and attain service learning designation status for their courses. Students can search for these courses using the service learning attribute in CyberBear.

## Nonprofit Leadership Alliance

The University of Montana is an affiliate of the national Nonprofit Leadership Alliance (NLA). The NLA program at UM is designed to be a degree enhancement certification program that complements a student's major. The program provides students with academic and extra-curricular opportunities to gain skills and abilities in preparation for professional careers in the nonprofit sector. All Nonprofit Leadership Alliance students acquire knowledge and skills in general nonprofit management, fund-raising principles and practices, board committee development, program planning, and grant writing. Upon completion of the NLA requirements, students receive the national Certified Nonprofit Professional (CNP) credential. The Office for Civic Engagement operates the Nonprofit Leadership Alliance program in addition to the minor in non-profit administration. For more information contact (406) 243-5159 or browse the Nonprofit Leadership Alliance website.

## The Clinical Psychology Center

The Clinical Psychology Center (CPC) is operated by the Department of Psychology at the University of Montana. The CPC provides confidential assessment, consultation, intervention, and psychotherapy services. We are able to support children, adolescents, adults, couples, families, and groups.

The CPC is a training clinic, staffed by doctoral students in Clinical Psychology and School Psychology. Although we are located on the University of Montana campus, the CPC serves the entire Missoula community. Our services are provided by student clinicians under direct supervision of licensed clinicians from the Department of Psychology faculty.

You may contact the clinic at (406) 243-2367 or by email at [CPCFrontDesk@mso.umt.edu](mailto:CPCFrontDesk@mso.umt.edu). For more information, visit the Clinical Psychology Center website.

## UM Physical Therapy Clinic

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The Nora Staael Evert Physical Therapy Clinic at the University of Montana provides services that include physical therapy and wellness to University of Montana students, faculty, and staff and active individuals of all ages in the community. In addition to physical therapy services, the UMPT Clinic also provides physical therapy and fitness programs for people with physical limitations, disabilities, and chronic illnesses. Programs and services include neurology and chronic disease PT services, sports and orthopedic PT services, and the New Directions Wellness Center.

For more information, you may contact the clinic at (406) 243-4006 or visit the offices in the Skaggs Building, room 129.



# Student Services

## UM Housing/UM Dining

### UM Housing

The University of Montana-Missoula residence halls are a part of the University and Missoula communities. The campus is a center for educational, cultural, and social activities. Residing in UM housing places the student at the center of these activities. Our mission is to provide safe, clean, healthy and affordable living and learning facilities that foster an inclusive community living environment for students, staff, faculty, and guests. Services provided in these facilities support and nurture educational experiences and personal development at the University of Montana. The University houses nearly 2,300 students in nine residence halls on campus. The residence halls staff is made up of resourceful people. Sharing ideas, observations, or questions with them will benefit residents. Resident assistants offer help and resources when students experience problems with University life. The residence hall room rate includes a furnished room with all utilities, use of laundry facilities, Internet access, and cable TV.

The Montana Board of Regents requires all freshmen and students who have earned fewer than 30 semester credits to reside in the University's residence halls. Students are required to continue living in the residence halls for two semesters or until the student earns 30 semester credits. Any student who moves in to the residence halls at the beginning of the semester is required to reside in the residence halls for the entire semester. Students must be enrolled for at least seven credits to be eligible to live in a residence hall unless they have prior approval from the Director of UM Housing. Exceptions to residence hall living may be made for students who reside with a family member and for students who are married or are single parents. Other exceptions are made under special circumstances on an individual basis. Any student requesting an exception to the residency requirements must submit a request in writing, accompanied by supporting documentation, to the Director of UM Housing. Students are not released from the residency requirements until they receive an official notification from the Director of UM Housing. Students who have earned 30 semester credits or more are not subject to the residency requirements, but are encouraged to live on campus. Housing in the residence halls is assigned on an Academic Year basis, including Fall Semester and Spring Semester. Students requesting to move out during the semester or at the end of Fall Semester must be approved. Housing is available for Spring Semester only for newly admitted students for Spring Semester. All students living in the residence halls are required to contract for one of the on-campus meal plans with UM Dining.

Rooms in residence halls are assigned in order of application completion. The residence halls application is accompanied by a \$225.00 fee. \$25.00 is a non-refundable processing fee, and \$200.00 is a prepayment for housing. Application forms, cancellation policies, and additional information may be obtained from the UM Housing Office website.

UM Disability Services for Students and UM Housing work together to ensure that students with disabilities can participate in all UM Housing programs. If you have a disability and will need to request reasonable modifications for housing, please indicate the type of modifications you are requesting on the housing application and contact Disability Services for Students. Medical documentation may be required. Please note that timely housing applications and requests for accessibility are critical if you wish to have accessible housing when you arrive on campus. To contact Disability Services for Students, please call 406-243-2243.

Lewis & Clark Village

## University Of Montana

### *(Upperclass and Graduate Housing)*

Lewis & Clark Village offers two and three-bedroom apartments designated for single students without dependents at the University of Montana who will have accumulated at least 60 credit hours by the time they move into the apartments. Lewis & Clark Village is also available to single students who have acquired 30-59 credits and have a 3.0+ GPA with no prior conduct. The apartments are located off campus just south of Dornblaser Stadium on South Higgins Avenue. They are within easy walking or biking distance from the University and are adjacent to the Park n' Ride, which provides free and easy transportation to the UM campus. The apartments are furnished with all utilities paid including cable TV and Internet access.

Prospective tenants may submit applications together with a requested roommate(s). If a tenant does not have a roommate preference, UM Housing will assign roommates based on like gender. As space allows, we will attempt to take in to consideration other living preferences such as age, smoking, alcohol tolerance, and length of agreement.

Applications for the Lewis & Clark Village are available from the UM Housing website. Your application must be accompanied by \$375.00, \$25.00 of which is a non-refundable processing fee, and \$350.00 of which is a security deposit.

A complete set of policies, photos, and a site map are available on the UM Housing website.

### **University Villages**

The University has 566 apartments for married students, single students with dependents, and students with disabilities who have a live-in care attendant. All apartments are within walking distance of the campus. University Villages consists of three villages with units ranging from studio to four-bedroom apartments.

Housing is assigned according to the date of application and notification is given approximately twenty (20) days before housing becomes available. All applications must be updated every six (6) months in order for applicants to remain on the assignment list. A \$350.00 security deposit must be submitted when an apartment is assigned. The security deposit is refundable when the rental agreement is terminated provided the apartment rental fees are current and no damage or cleaning fees are assessed. The security deposit is forfeited if the student cancels after accepting the assigned apartment.

Due to the demand for University Villages housing, applications for University Villages should be submitted well in advance before the desired move-in date. Applications must be accompanied by a \$25.00 non-refundable processing fee. To apply for University Villages or for additional information on eligibility and policies, visit the UM Housing website.

### **Personal Property**

The University of Montana-Missoula is not responsible, by state law, for damage to, or theft of, the personal property of students on campus (for example: damage to clothing or a stereo due to fire, smoke or water). Students are encouraged to adequately insure their personal property and to protect their property by locking their room/apartment and car and taking other simple precautions to prevent theft and damage.

### **UM Dining**

Winner of 22 international dining awards and home to nationally renowned chefs, University Dining Services (UDS) is dedicated to bringing you a variety of delicious, well-balanced meals at reasonable prices. Our extensive selection of dining options include: the Food Zoo, Food Course in the UC, the Corner Store, The

## University Of Montana

Market, Pizza Hut, the Iron Griz, La Peak, Biz Buzz, Think Tank, Sidebar, and Recess. All University Dining Services and Jus Chilln' locations accept cash, checks, Visa/Mastercard, UMoney and appropriate meal plans.

### **Meal Plans**

To ensure you have healthy and nutritious food options, The University of Montana requires students living in a residence hall to purchase a meal plan. A meal plan is a pre-paid purchase of meals for the entire semester. UM Dining Services offers two meal plans designed for students living on campus: the ALL CAMPUS and the LOMMASSON PLUS. Each plan provides a Weekly Meal Plan Fund designed to ensure that meals can be purchased for the entire semester. Food purchases are deducted from your Weekly Meal Plan Fund and may be used as quickly or as modestly as you choose. Weekly Meal Plan Funds reset every Sunday morning; unused Weekly Meal Plan Funds are NOT carried forward from one week to the next. For full details, visit the UM Dining Services website and click on "Meal Plans" or call 406-243-6325. The ALL CAMPUS Meal Plan provides campus-wide dining flexibility and is accepted at all Dining Services locations. The LOMMASSON PLUS Meal Plan is accepted at the Lommasson Center restaurants (*The Food Zoo, Cascade Country Store*), La Peak, and Jus' Chill'n located in the Campus Fitness and Recreation Center.

A student may convert their meal plan from ALL CAMPUS to the LOMMASSON PLUS Meal Plan only once during the first two weeks of the semester. Upgrades, from the LOMMASSON PLUS Meal Plan to the ALL CAMPUS Meal Plan, are accepted throughout the semester.

The COMMUTER MEAL PLAN is designed for students living off the main campus who want the convenience of pre-purchased campus dining. Open your COMMUTER MEAL PLAN account with as little as \$20.00. For deposits of \$50.00 or more UDS will add a 10% premium to your account. COMMUTER MEAL PLAN funds may be used at any of UDS' 14 restaurants, both Jus Chill'n locations on the main campus and the College of Technology snack bars. Make additional deposits anytime (\$20 minimum). Payment methods include cash, check, credit card UMoney and Cyberbear/student account (some restrictions apply, call 406-243-6325 for details).

For more information on meal plans and other special dining services, please contact the University Dining Services main office at (406)243-6325 or visit the UM Dining Services website.

### **Career Services**

The Office of Career Services assists prospective, current and alumni students in developing viable career objectives, choosing academic majors and creating the plans necessary to achieve those goals. Assistance is also provided to students who wish to modify their career and academic goals to improve their employment options. Career Services provides a wide array of services designed to facilitate the transition from education to employment, including:

- career counseling and assessments;
- workshops on resume writing, interviewing and job search strategies;
- taped mock interviews;
- on-campus interviews with employers;
- Griz eRecruiting, UM s on-line recruitment system; and
- student employment.

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Career Services maintains an extensive on-line library of current resources on general and specific career and educational options, resume, interviewing and job search reference materials and employment resources.

A variety of employment and career fairs are hosted each year to bring students and employers together to discuss volunteer, internship, research, part-time and full-time employment opportunities. The Student Employment Fair, Big Sky Career and Academic Enrichment Fair and Health Professions Fair are held each Fall semester. The Educators' Career Fair is open to teaching, administrative, school counseling, speech language pathology, and school psychology professionals and is held each spring semester.

All UM students are eligible to establish a free Griz eRecruiting account which allows students to post their resumes on the web for viewing by and referral to employers, participate in the on-campus recruiting program and view and apply for current job and internship vacancies in the online jobs database.

For additional information, contact the Office of Career Services at 154 Lommasson Center, call (406) 243-2022, e-mail: [careers@umontana.edu](mailto:careers@umontana.edu) or visit the UM Career Services website.

### Student Employment

Student Employment is an online job posting system for employers and online job search and application process for students. This makes it possible to post jobs for on-and off-campus, work-study, non-work-study, and volunteer employment. Student Employment works closely with Financial Aid and Student Payroll to assure students are being hired and paid within the established guidelines. Student Employment hosts a free Student Employment Fair during the first week of classes every fall. We also coordinate National Student Employment Week and the Student Employee of the Year (SEOTY) Award.

For additional information, contact the office of Student Employment at 154 Lommasson Center, call (406) 243-2239, email [studentjobs@umontana.edu](mailto:studentjobs@umontana.edu) or visit the UM Student Employment website.

### Testing Services

The Office of Testing Services is a member of the National College Testing Association and Consortium of College Testing Centers and is recognized as a NCTA certified test center. Testing Services subscribes to the NCTA professional standards and guidelines, providing the administration of educational, professional licensing, and certification exams. Examples of our services include:

- National standardized academic admissions exams (ACT, GRE, GMAT, MCAT, LSAT, PCAT, MAT, TOEFL, etc.)
- Professional certification exams (CPA, PRAXIS, NREMT, PTCE, DANB, MPRE, ACSM, ACE, Microsoft Office, etc.)
- Information technology certifications (CompTIA, Adobe, Cisco, Microsoft, etc.)
- College credit by examination through CLEP and DSST
- Proctoring services for UM students, online, and distance learning programs

For additional information, contact Testing Services at Lommasson Center, Suite 154, call (406) 243-2175, or [testingservices@umontana.edu](mailto:testingservices@umontana.edu), or visit the UM Testing Services website.

## Academic Enrichment

The University of Montana offers internships in most disciplines. Internships can be part- or full-time, paid or unpaid, and generally run the length of an academic semester. Internships are supervised by key faculty members and allow students to work in positions related to their academic and career goals while utilizing knowledge, theory, and skills learned in the classroom. Learning objectives complemented by faculty-assigned reflective learning projects or reports distinguish and showcase internships as essential educational experiences. Internships are available locally, state-wide, and throughout the nation in various settings, including non-profit agencies, small businesses, multi-national corporations, and city, state, and federal government offices. International internships are also available, many through a partnership with IE3 Global Internships. More detailed information is available at Academic Enrichment, Davidson 002; (406) 243-2815; fax (406) 243-5866; or visit the website .

## Disability Services for Students

Students with disabilities can expect access at the University of Montana-Missoula. Wherever possible, the University exceeds mere compliance with the civil rights laws of Section 504 of the Rehabilitation Act, the Americans with Disabilities Act, and the Montana Human Rights Act. The University's programs are readily accessible to and usable by people with disabilities. The campus assures Program access is delivered to the maximum extent feasible and in the most integrated manner possible.

Disability Services for Students, a student affairs office, leads the University's program access efforts for students. Disability Services provides and coordinates reasonable modifications and advocates for an accessible and hospitable learning environment. We encourage self-determination and self-reliance by students with disabilities. Examples of services include priority registration, physical accessibility arrangements, academic adjustments, auxiliary aids (readers, scribes, sign language interpreters, etc.), alternative testing, conversion of print textbooks to e-text, assistive technology assistance, and other reasonable modifications. To achieve equal access, Disability Services vigorously pursues the removal of informational, physical, and attitudinal barriers to all University programs.

Students with disabilities should plan ahead and get in touch with Disability Services prior to arriving on campus. For additional information, contact Disability Services for Students in Lommasson Center 154, by phone at (406) 243-2243 (Voice/Text), by video phone at (406) 203-0591, or or by email at [dss@umontana.edu](mailto:dss@umontana.edu). Please visit the UM Disability Services for Students website to find details on our services.

## The UM Veterans Education and Transition Services (VETS) Office

The University of Montana Veterans Education and Transition Services (VETS) Office is located on the Southeast corner of the Mountain Campus at 1000 E. Beckwith Avenue, where Beckwith Ave. becomes Campus Drive. The office serves all UM veterans and their family members, including those attending the Missoula College. VETS Office hours are M-F 8 a.m. - 5 p.m.

The Veterans Office complies with the Veterans Benefits and Transition Act of 2018 (38 USC 3679(e)). The Act states that we will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

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Contact information:

UM VETS Office  
1000 E. Beckwith Avenue  
veterans@umontana.edu  
UM Vets Office website  
406-243-2744 Phone  
406-243-5444 Fax

## International Students and Scholars

The office of International Students and Scholars (ISS) assumes responsibility for the general welfare of foreign students at the University of Montana from admission to graduation and practical training. It provides direct support services, consultation, and liaison. The office assists in the reception and orientation of foreign students and helps with their integration into the University and community. It interprets immigration regulations and laws and assists students in maintaining legal status and obtaining benefits related to their visa status. Staff members provide advising for academic and personal concerns, cultural adjustment, financial problems, and other concerns that arise.

The staff works with the International Student Association and other student groups, as well as the Missoula International Friendship Program to sponsor cultural activities, a speaker's bureau, a community hospitality program for students, leadership opportunities for students, and the annual International Culture and Food Festival. ISS coordinates the UM Global Partner Program, a campus peer-mentoring program. It offers educational field trips; winter and summer break activities, as well as initial and on-going orientation and educational programs on relevant topics. ISS manages the campus' International House, an activity center for inter-cultural events.

International Students and Scholars works closely with other service and advising offices on campus to optimize those services and their visibility to foreign students.

International Students and Scholars prepares certificates or petitions for the Exchange visitor J-1 visa and advises foreign scholars who need to change or extend their visa status, travel temporarily out of the United States or bring dependents to this country. Finally, the office serves as liaison to federal agencies dealing with foreign student and scholar concerns, such as the US Citizenship and Immigration Service, Department of Labor, Department of State, Internal Revenue Service and Social Security Administration. For more information visit the International Student and Scholars website or contact us at [global.engagement@umontana.edu](mailto:global.engagement@umontana.edu)

## Global Engagement Office

The Global Engagement Office promotes and provides international life-changing experiences and related educational opportunities, serving as a resource that contributes to the culture of a globally-minded community through its several different sections. The GEO is responsible for the recruitment of all international students to UM through a variety of programs including Study Abroad, Partner Programs, English Language Institute, Undergraduate Pathway (UP) Program, and Full Admissions. The GEO works with its partners to receive sponsored international students and administer their programs. The English Language Institute (ELI) department of the GEO serves international students who wish to improve their English language and academic skills in order to pursue studies at UM or another higher education institution. The GEO also offers students the exciting opportunity to study abroad in one of over 50 countries

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through three different UM sponsored programs: Faculty-Directed Programs, Partner Universities, and International Student Exchange Programs (ISEP). Global Gateway, an innovative educational service portal within the GEO, develops partnerships with the UM campus, local schools, and community organizations that promote cultural awareness and sharing foreign cultures, traditions, and customs. For additional information, visit GEO in the International Center, call (406) 243-2288, email [global.engagement@umontana.edu](mailto:global.engagement@umontana.edu)

### English Language Institute

UM offers an intensive English program through the English Language Institute. Students are enrolled in 20 hours of class each week. ELI's curriculum addresses the needs of international students whose scores are below UM language requirement scores of 525 ITP/ 70iBT. ELI courses also address the needs of students who want to raise their English language proficiency in order to gain admission to a university or college where English is the language of instruction. Through this program, ELI students can begin their university studies at UM in several ways. They can successfully participate in the ELI/UM Bridge Program, show their academic readiness through ELI coursework, or meet the TOEFL requirements. For more information, visit the English Language Institute website.

### Curry Health Center

406-243-2122

Curry Health Center provides affordable, accessible, high quality, student-centered health services to University of Montana students to enhance student learning, promote personal health and development and teach important life skills.

Curry Health Center is YOUR campus based health care center, with services designed to meet the needs of college students and the campus community.

#### General Information

The Curry Health Fee is paid at registration by students who enroll for seven credits or more (excluding distance only students). Students taking less than seven credits per semester may elect to pay the Health Fee at any time during the semester. The Curry Health Center provides a wide range of primary health care and health promotion services at discounted rates well below what students would generally find in the Missoula community.

Services in Wellness and Student Advocacy Resource Center (SARC) are available to all students. Services in Medical, Counseling and Dental are available only to students who pay the Curry Health Fee.

We recognize the busy nature of student schedules and seek to provide accessibility for both urgent needs and more routine care via appointments or walk-ins. We are happy to coordinate care with providers "back home" or assist with referral to community resources for problems beyond the scope of the Curry Health Center.

#### Medical Services

406-243-4330

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Curry Health Center provides both primary health care services as well as walk-in care services to the University of Montana student population.

- Traveler's Health (Traveler's Health Services are also available to UM Faculty and Staff)
- Allergy Shots
- Appointment & Walk-In Care
- Preventive Care
- Injury & Illness
- Women s & Men s Health
- Saturday Clinic
- Lab & X-ray

### **Counseling**

406-243-4711

### **Mental Health Crisis Line**

800-273-TALK

Counseling provides rapid access and brief therapy for University of Montana students.

- Individual & Groups
- Psychiatry
- Crisis Services

### **Behavioral Health Options**

- Alcohol Classes
  - Out-Patient Counseling
  - Substance Use Counseling

### **Dental**

406-243-5445

Dental care is available to students who have paid the Curry Health Fee. The Dental Clinic's primary focus is on urgent and preventative care. While urgent care is given priority, routine dental care is also provided as time allows. Charges for dental services are set at a substantially lower rate than the private sector.

#### Services Provided

1. Urgent dental care.
2. Fillings, root canals, simple extractions, crown and bridge procedures (as time permits).



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3. Teeth cleaning, periodontal scaling, and oral hygiene instructions.
4. Routine exams and X-rays ( checkups') on a limited basis-one per year.
5. Night guards for TMJ disorders and protection from grinding.

Referrals to specialists or other dentists are provided for students whose dental needs are beyond the scope/capabilities of the clinic, e.g., oral surgery, complex root canals, orthodontics, dentures, etc. Charges incurred at private offices are the student's responsibility.

The Student Insurance plan does **not** cover dental charges.

### **Wellness**

406-243-2809

Wellness at Curry Health Center provides health education and wellness services to students to help them stay safe and healthy, now and in the future.

- Safer Sex Resources
  - Tobacco Quit Kits
  - Personal Health Coaching
  - Stress Management
  - Peer Educator Training

### **Student Advocacy Resource Center (SARC)**

406-243-5244

#### **24- Hour Crisis Support Line**

406-243-6559

Our advocates and staff provide support to anyone who has experienced sexual assault, relationship violence, stalking, and discrimination. The goal of our confidential advocacy services is to help ensure client safety and support personal autonomy, worth, dignity and power.

Our services are comprehensive and we actively listen, believe in, assist and support our clients. SARC interns and professional staff provide brief counseling services for students who have experienced sexual assault or relationship violence. Based upon your decisions and choices, we also provide referrals and connections within the justice, medical, and social service systems.

Your communications with SARC are confidential. Law enforcement, University administration, faculty, and/or family members will not be contacted by SARC unless you request us to do so. Additionally, you have the option of being completely anonymous in your interactions with SARC.

#### **Services Provided**

- Drop-in Support Center and 24-hour Support Line
- Crisis Intervention and Case Management

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- Academic, Medical, and Law Enforcement Advocacy
- Individual and Group Counseling

### **Health Services Pharmacy**

406-243-5171

The Health Services Pharmacy, located in the Curry Health Center building, offers students a complete prescription service and accepts many 3rd party insurance plans at very reasonable rates. The pharmacy is operated by the School of Pharmacy in cooperation with Curry Health Center and is used for training pharmacy students under the supervision of registered pharmacists.

### **Insurance Billing**

406-243-2844

Because of your privacy rights and concerns, Curry Health Center will not automatically bill your insurance plan for services received at Curry Health Center. If you would like to file an insurance claim for services received at Curry Health Center, you must request this through the clinic that you received services from. Curry Health Center will provide a Walkout Statement to you that you can send to your insurance. Because your insurance company reimburses you directly, you are responsible for paying charges incurred at Curry Health Center, not your insurance company.

Curry Health Center is not a Medicare/Medicaid provider, nor do we accept direct payments from insurance companies.

## **UM Police Department**

The UM Police Department is composed of the UMPD Police and UMPD-Parking Division. Both areas of UMPD work in partnership with the campus community to provide the most professional, effective public safety services possible. From parking management to crime prevention, the University of Montana Police Department is dedicated to supporting an environment which is safe and conducive to learning.

### **UMPD - Police**

The University of Montana Police Department (UMPD) serves and protects the students, staff, faculty, and all people and property within the University of Montana campus and properties.

Both Police Dispatchers and Officers are on duty 24 hours a day, every day of the year. Our Police Officers and Dispatchers are certified and trained by the Montana Law Enforcement Academy (MLEA). UM Police Officers have the exclusive responsibility to act upon law-enforcement matters and perform police functions for the UM Main Campus and the Missoula College. UM Police Officers investigate all crimes and enforce federal, state, and local laws as well as University of Montana policies.

All sworn UMPD officers have successfully completed training at the Montana Law Enforcement Academy (MLEA) or equivalent training recognized by the Montana Peace Officer Standards and Training council. Our officers have the same authority and powers of arrest as any officer in the state. In addition to the MLEA training, UMPD officers receive additional training throughout the year.

### **UMPD - Parking Division**

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The Parking Division of UMPD is dedicated to managing a shared resource to provide the best alternatives and access to the University of Montana campus. Parking is limited. To help alleviate some of this congestion UMPD helps fund ASUM Transportation and Mountain Line Transportation. This helps provide free alternative transportation options to our students, faculty, and staff.

All surface parking lots as well as street parking require permits specific to the area from 7 a.m. to 5 p.m., Monday through Friday. Although permits are not required by UMPD after hours and on weekends, Quick Stops, Service and Delivery, and ADA spots are enforced 24 hours. Events on campus may also charge for parking after hours. **Caution: Read signs carefully.** Each surface parking lot is signed at the entrance and further restrictions are usually designated within the lot.

Visitors here for special events are advised to make arrangements with the department with which they have business prior to their visit.

For more information, visit the UM Police Department website.

## University Center

The University Center enriches campus life by providing student-focused opportunities, programs, services, and space.

- The University Center is student-focused. We provide students from diverse backgrounds with the guidance and resources to define and participate in their own learning and development. Student learning, discovery, and engagement are at the core of our work.
- The University Center is committed to providing a broad range of opportunities that enrich the university experience. Through activities, governance, employment, and volunteerism students develop life-long leadership and professional skills.
- The University Center designs programs and activities that appeal to a wide variety of student interests. Our core values learning, leadership, diversity, and fun reflect our commitment to relevant and intentional programs that enhance students overall educational experience.
- The University Center offers a myriad of convenient services including an art gallery, hi-tech study lounge, game room, theater, conferencing services, shipping and mail center, bank and ATMs, copy center, full-service hair salon, bookstore, market, food court, and campus OneCard.
- The University Center provides an inclusive, clean, well-maintained, and environmentally-conscious space for the campus and greater community to meet, study, and interact.

Visit us online at the University Center website.

## Sports and Recreation

Organized sports and recreational activities are an important part of academic and leisure life at the University.

### Intercollegiate Athletics

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The University of Montana-Missoula is a Division I member of the National Collegiate Athletic Association and the Big Sky Conference. The athletic program consists of 15 varsity teams. The men's program includes competition in basketball, cross country, football (Football Championship Subdivision), indoor and outdoor track, and tennis. The women's program offers competition in basketball, cross country, tennis, indoor and outdoor track, volleyball, golf, softball, and soccer. Athletic scholarships are offered in all sports.

### **Campus Recreation**

The Campus Recreation Department offers a wide variety of services to the students, faculty and staff of The University of Montana. A comprehensive intramural sports program provides opportunities for men's, women's and co-recreational team competition and individual events. An outstanding Fitness Program offers yoga, pilates, strength training and other sports specific conditioning.

Recreational facilities include gymnasiums, weight rooms, and indoor running track, handball and racquetball courts, multipurpose fitness studios, tennis courts, indoor swimming pool, indoor climbing wall, and a golf course. Sports equipment such as balls, bats, gloves, etc. can be checked out for free and other equipment such as volleyball, nets, badminton sets, and horseshoes require a cash deposit.

The Outdoor Program offers services to students, faculty, staff and the general public, supplying information, training, and education about outdoor pursuits and sports. Classes are offered on a non-credit basis for activity credits through the Health and Human Performance Department. The Outdoor Program also organizes outdoor trips and hosts high adventure and educational films and lectures.

### **University Golf Course**

The University of Montana-Missoula has a picturesque nine/eighteen hole golf course open to students, faculty, and staff, as well as the general public. It is located approximately one-half mile south of the main campus.

The course has a clubhouse restaurant, driving range, putting and chipping green. The pro shop is well-stocked and club and cart rentals are available. Private lessons are offered by appointment with an assortment of rate structures.

### **Grizzly Pool**

The University of Montana Grizzly Pool is a 7-lane, 25-yard indoor pool. Present programs include: fitness swims, recreational swims, classes for all ages (infant to adult), life guarding and WSI classes, pool rentals, Swim Shop, and competitive skills lessons.

