

6-1-2004

Central Washington University Undergraduate/Graduate Catalog 2004-2005

Central Washington University

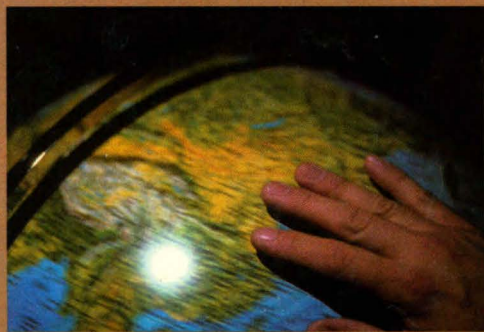
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CENTRAL WASHINGTON UNIVERSITY



2004-2005

UNDERGRADUATE/GRADUATE CATALOG



INFORMATION DIRECTORY

ONLINE ELECTRONIC CATALOG

HTTP://WWW.CWU.EDU

The Online Electronic Catalog (OEC) is the official university's compilation for all curriculum. The OEC serves as the basis for major, minor and program requirements for the academic year. For current policy and curriculum requirements refer to OEC.

This catalog provides a general guideline of courses offered by the university. The classes and programs described herein are implemented at the sole discretion of the university and are subject to change at any time without notice. Information contained on classes and programs are illustrative only and are not intended to create any contractual obligation or covenant with the University.

LIMITATION OF LIABILITY

The university's total liability for claims arising from a contractual relationship with the student in any way related to classes or programs shall be limited to the tuition and expenses paid by the student to the university for those classes or programs. In no event shall the university be liable for any special, indirect, incidental, or consequential damages, including but not limited to, loss of earnings or profits.

INFORMATION DIRECTORY

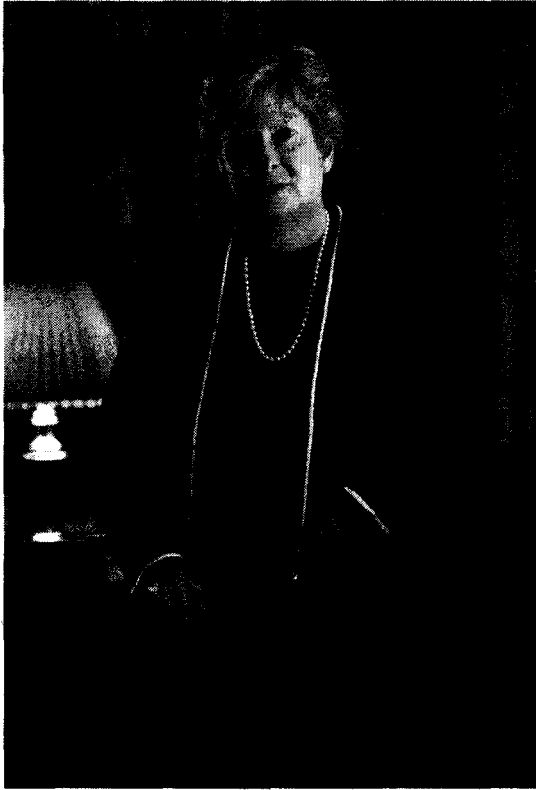
Academic Advising Center, Bouillon 206	(509) 963-3523
Admissions Office, Mitchell Hall, 1st Floor .....	.963-1211
Associated Students (ASCWU), SUB 106 .....	.963-1693
Career Services, Barge 202 .....	.963-1921
Cashiers Office, Barge Hall 104 .....	.963-2224
Conference Programs, Courson Conference Center .....	.963-1141
Continuing Education Office, Bouillon 203 .....	.963-1504
Central Switchboard .....	.963-1111
Disability Support Services, Bouillon 205. ....	.963-2171
Financial Aid, Barge Hall 115 .....	.963-1611
Graduate Office, Barge Hall 305 .....	.963-3103
University Housing and New Student Programs .....	.963-1831
International Studies and Programs, International Center .....	.963-3612
Library .....	.963-1021
President's Office, Barge Hall 314 .....	.963-2111
Provost, Barge Hall 302 .....	.963-1400
Public Safety & Police Services .....	.963-2958
Registrar, Mitchell Hall, 1st Floor .....	.963-3001
Student Affairs, Bouillon .....	.963-1515
Student Employment, Barge Hall 103 .....	.963-3008
Student Financial Services, Barge Hall 104 .....	.963-3546
Student Health Medical Services, 11th & Poplar .....	.963-1881
Student Counseling Services .....	.963-1391
Transcript Line .....	.963-1227
University Advancement .....	.963-1491
Veterans Office, Mitchell Hall, 1st Floor .....	.963-3028

Availability of Safety Awareness Information

The Department of Public Safety and Police Services is responsible for reporting crime statistics in compliance with the "Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act." Central's annual security report is available at <http://www.cwu.edu/~police>. It contains information regarding crime prevention programs, the law enforcement authority of the university police, policies concerning the reporting of crime, crime statistics for the most recent three-year period and other information about security that is required by law. A paper copy of the information is also available upon request by writing to: Central Washington University, Department of Public Safety and Police Services, 400 East University Way, Ellensburg, WA 98926-7527.

CENTRAL WASHINGTON UNIVERSITY

A letter to Central Washington University faculty, staff and students



Welcome to Central Washington University—currently the fastest-growing public university in the state of Washington. One reason: we're committed to serving the needs and interests of our students. You've no doubt seen the question we pose in our promotional and recruitment materials: "What's Central to You?" When our current students and alumni have been asked this question, they have told us they chose Central because of its outstanding academic programs and student-life programs. They like the way these programs prepare students for success in college and after college. They tell us they value Central because we focus on students and meet the needs of both traditional and nontraditional students. Students on the Ellensburg campus praise our outstanding residence life programs and those at the centers appreciate the convenience of studying close to where they live and work. All of this is just what we like to hear. At Central, we take pride in our personal approach to education, the breadth of our educational offerings and our attention to the many facets of students' lives: intellectual, professional, social, ethical, cultural and creative.

The university catalog is not leisure reading for most people, but students who take the time to explore its pages learn a great deal about our campus, its programs and its opportunities. The catalog provides a window on our academic life and a road map for your journey

through your educational program. Within these pages, you'll find something about our origins, our current mission and our vision for the future. You'll learn about the majors, minors and degree programs we offer and the courses that are required to complete each. You'll learn how to apply to the university and the requirements for graduation. I encourage you to find the time to become familiar with this catalog and to keep it handy as a reference for those times when questions arise.

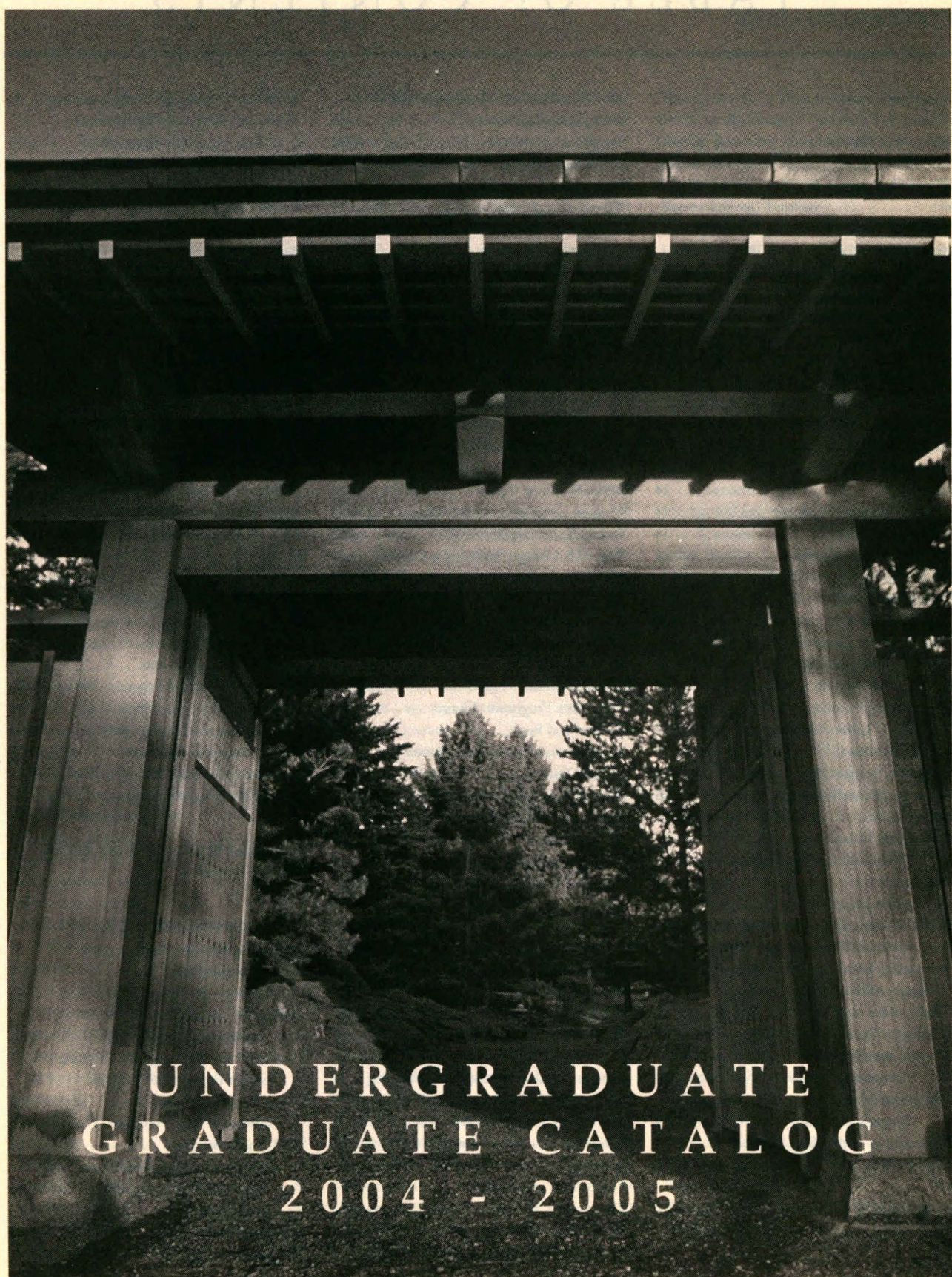
At Central Washington University, we are fortunate to serve Washington's diverse population and beyond. Through our commitment to a diversity of ideas and people, we provide students with the opportunity to understand and value different cultures, life circumstances and different ways of thinking. Our students have opportunities to participate in undergraduate research and creative activity, study-abroad opportunities and service learning, all of which broaden their view of the world and inspire lifelong learning.

I am pleased that you have decided to become a part of our community of scholars at Central Washington University. Students, faculty and staff working together here generate vitality and enthusiasm for learning and discovery. I hope this publication serves you well and that your association with Central Washington University will be happy and rewarding. Most important, I hope you are able to achieve your educational and professional goals with us.

Sincerely,

Jerilyn S. McIntyre
President

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UNDERGRADUATE
GRADUATE CATALOG
2004 - 2005

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CAMPUS MAP

CENTRAL WASHINGTON UNIVERSITY

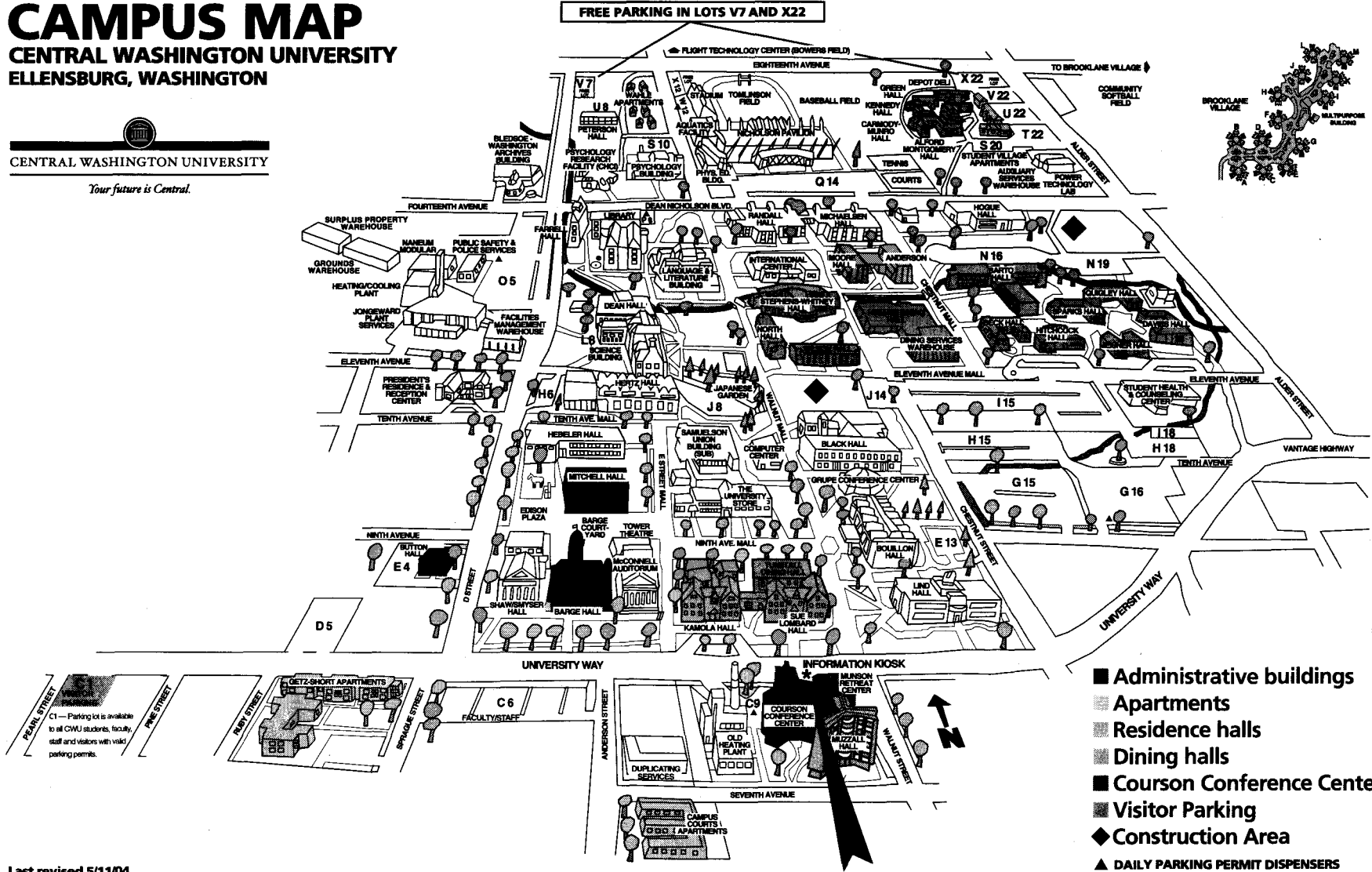
ELLENSBURG, WASHINGTON



CENTRAL WASHINGTON UNIVERSITY

Your future is Central.

FREE PARKING IN LOTS V7 AND X22



- Administrative buildings
- ▨ Apartments
- ▩ Residence halls
- ▧ Dining halls
- ▦ Courson Conference Center
- ▨ Visitor Parking
- ◆ Construction Area
- ▲ DAILY PARKING PERMIT DISPENSERS

PARKING-INFORMATION KIOSK

Last revised 5/1/04

EEO/AA/TITLE IX INSTITUTION. TDD 509-963-2143

CWU CAMPUS MAP

QUARTERLY CALENDAR

FALL QUARTER

Open Registration
 Classes begin
 Change of Class Schedule
 Deadline to apply for baccalaureate degree for Winter
 Advising Week
 Uncontested Withdrawal Deadline
 Veterans Day Holiday
 Early registration for Winter
 Thanksgiving Recess
 Faculty Development/Study Day
 Final Exam Week
 Days of Instruction

2004–2005

September 20–21
 September 22
 September 22–28
 October 1
 November 1–5
 November 5
 November 11
 November 8–22
 **November 24–26
 December 6
 December 7–10
 (54)
 **All day Wednesday

2005–2006

September 19–20
 September 21
 September 21–27
 September 30
 October 31–Nov. 4
 November 4
 November 11
 November 7–21
 **November 23–25
 December 5
 December 6–9
 (54)
 **All day Wednesday

WINTER QUARTER

Registration
 Classes begin
 Change of Class Schedule
 Deadline to apply for baccalaureate degree for Spring
 Martin Luther King Jr. Holiday
 Advising Week
 Uncontested Withdrawal Deadline
 Presidents Day Holiday
 Early registration for Spring
 Faculty Development/Study Day
 Final Exam Week
 Days of Instruction

2004–2005

January 3
 January 4
 January 4–10
 January 14
 January 17
 February 14–18
 February 18
 February 21
 February 22–March 4
 March 14
 March 15–18
 (52)

2005–2006

January 2
 January 3
 January 3–9
 January 13
 January 16
 February 13–17
 February 17
 February 20
 February 21–March 3
 March 13
 March 14–17
 (52)

SPRING QUARTER

Open Registration
 Classes begin
 Change of Class Schedule
 Deadline to apply for baccalaureate degree for Summer
 Advising Week
 Early registration for Summer
 Uncontested Withdrawal Deadline
 Early registration for Fall
 Memorial Day Holiday
 Faculty Development/Study Day
 Final Exam Week
 Commencement
 Days of Instruction

2004–2005

March 28
 March 29
 March 29–April 4
 April 8
 May 9–13
 May 9–June 3
 May 13
 May 16–27
 May 30
 June 6
 June 7–10
 June 11
 (53)

2005–2006

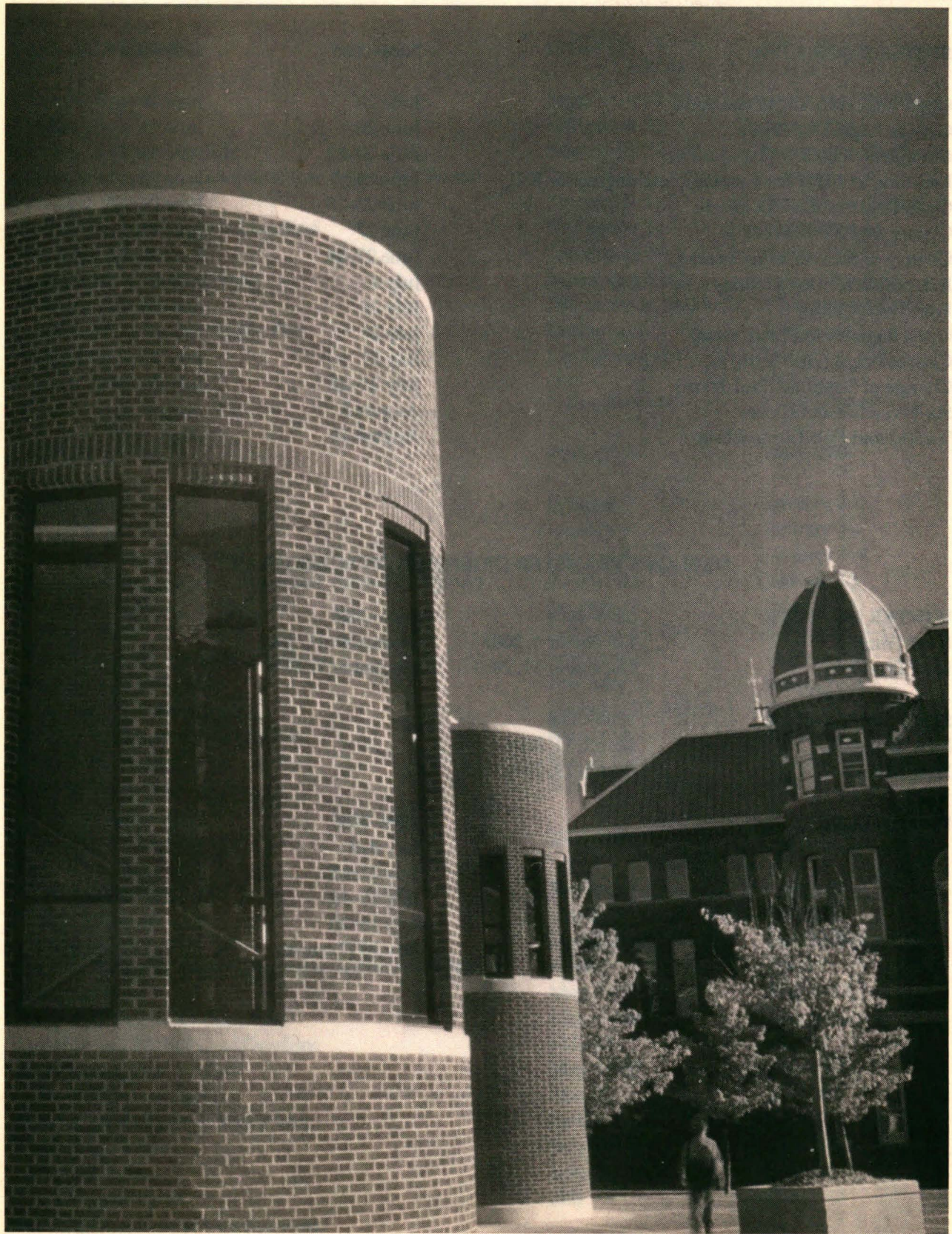
March 27
 March 28
 March 28–April 3
 April 7
 May 8–12
 May 8–June 2
 May 12
 May 15–26
 May 29
 June 5
 June 6–9
 June 10
 (53)

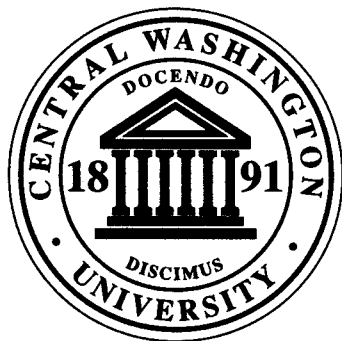
NOTE: Days of instruction (includes finals week)

SUMMER QUARTER	2004-2005	2005-2006
Open Registration (All Sessions)	June 20	June 19
Classes Begin (1st - Full)	June 20	June 19
Change of Schedule (1st - Full)	June 20-22	June 19-21
Deadline to apply for baccalaureate degree for Fall	June 24	June 23
Open Registration (Six Week)	June 27-28	June 26-27
Classes Begin (Six Week)	June 27	June 26
Change of Schedule (Six Week)	June 27-28	June 26-27
Independence Day Holiday	July 4	July 4
First Term Closes	July 20	July 19
Open Registration (2nd Term)	July 21	July 20
Classes Begin (2nd Term)	July 21	July 20
Change of Schedule (2nd Term)	July 21-22	July 20-21
Six-Week Session Closes	August 5	August 4
Second and Full Terms Close	August 19	August 18

NEW AND TRANSFER ORIENTATION SCHEDULES

WINTER QUARTER	2003-2004	2004-2005
New Transfer	December 4, 2003	December 11, 2004
New Freshmen	December 11, 2003	December 9, 2004
SPRING QUARTER	2003-2004	
New Transfer	March 11, 2004	
New Freshmen	March 19, 2004	
FALL QUARTER	2004-2005	2005-2006
	July 8-9	July 7-8
	July 12-13	July 11-12
	July 15-16	July 14-15
	July 19-20	July 18-19
	July 23 (Transfer)	July 22 (Transfer)





By Teaching, We Learn

History, Mission, Shared Values and Strategic Emphases

History

Central Washington University is one of six state-supported institutions offering baccalaureate and graduate degrees. The university has its own governing board, the Board of Trustees, with eight members appointed by the governor and approved by the state legislature. Established in 1890 as Washington State Normal School by the first legislature to fulfill the intent of the Federal Statehood Enabling Act for the establishment and maintenance of its various institutions of higher education, it became Central Washington College of Education in 1937, Central Washington State College in 1961 and Central Washington University in 1977.

Mission Statement

Central Washington University's mission is to prepare students for responsible citizenship, responsible stewardship of the earth, and enlightened and productive lives. Faculty, staff, students and alumni serve as an intellectual resource to assist central Washington, the state and the region in solving human and environmental problems.

Qualified faculty and staff create a community that encourages and supports the emotional, personal and professional growth of students from a variety of backgrounds. The university works with community colleges through statewide centers and employs technology to extend the reach of its educational programs.

The university community values teaching as the vehicle to inspire intellectual depth and breadth, to encourage lifelong learning and to enhance the opportunities of its students. The faculty develop and strengthen bachelor's and master's degree programs in the arts, sciences and humanities; teacher education; business; social services; and technological specializations. A strong liberal arts foundation; applied emphases; opportunities for undergraduate research, creative expression and international study; and close working relationships between students and faculty are hallmarks of the undergraduate experience. Graduate programs develop partnerships between faculty and students to extend scholarship to important areas of research and practice.

Vision

Central Washington University is becoming respected nationally for outstanding academic programs, global

sensitivity and engagement, and a stimulating intellectual community that prepares students for lifelong learning and a diverse and changing world.

Core Values

As a community of scholars, we are committed to:

- Each student's greatest good.
- Excellence achieved through a diversity of ideas and people.
- A rigorous curriculum and outstanding teaching.
- Intellectual inquiry, exploration and application.
- A supportive university community.

Strategic Goals

- Goal I. Provide for an outstanding academic and student life on the Ellensburg campus.
- Goal II. Provide for an outstanding academic and student life at the university centers.
- Goal III. Develop a diversified funding base to support our academic and student programs.
- Goal IV. Build mutually beneficial partnerships with industry, professional groups, institutions and the communities surrounding our campus locations.
- Goal V. Strengthen the university's position as a leader in the field of education.
- Goal VI. Create and sustain productive, civil and pleasant campuses and workplaces.

Equal Opportunity Policies and Practices

Central Washington University's policies and practices affirm and actively promote the rights of all individuals to equal opportunity in education and employment without regard to their race, color, religion, national origin, sex, sexual orientation, age, marital status, disability, or status as disabled or Vietnam era veterans. The university administers an affirmative action program for employment purposes and complies with applicable federal, state and local laws, regulations and executive orders. Policy statements on affirmative action, gender equity, sexual harassment and discrimination grievance procedures are located in Appendix A. The person responsible for institutional compliance with federal and state laws and institutional policies dealing with discrimination is Nancy E. Howard, Director, Office for Equal Opportunity, Barge Hall 211, (509) 963-2205 or TDD (509) 963-2207.

ACCREDITATION AND MEMBERSHIP

The university is accredited by the Northwest Commission on Colleges and Universities (NWCCU). Some programs have been accredited by specialized accrediting associations, including the Technology Accreditation Commission of the Accreditation Board for Engineering Technology (TAC/ABET) *, American Chemical Society Committee on Professional Training (ACS), American Council for Construction Education (ACCE), Accreditation Association for Ambulatory Health Care, Inc., American Dietetic Association (ADA), Association to Advance Collegiate Schools of Business (AACSB), Joint Review Committee on Educational Programs for EMT-Paramedic (JRCEMT-P), National Association of School Psychologists (NASP), National Association of Schools of Music (NASM), National Collegiate Athletic Association (NCAA), National Council for Accreditation of Teacher Education (NCATE), National Recreation and Park Association, and U.S. Government Printing Office Federal Depository Library Program (U.S. GPOFDLP).

The university holds membership in all of the major international, national, regional and state academic associations. Please contact the provost's office for a complete list.

*111 Market Place, Suite 1050,
Baltimore, MD 21202-4012,
Telephone (410) 347-7700.

STUDENT ACADEMIC SUPPORT

Academic Advising Center

The University's Advising Center provides entering freshmen, continuing students and transfer students with advising resources. These resources include (but are not limited to) specific faculty advisors, special program advisors, advising seminars, advising workshops and advising publications. General Education advising is available at the Academic Advising Center in Bouillon 206. Visit the Academic Advising web site at <http://www.cwu.edu/~acadadv/> for more information.

Students are also encouraged to seek advice from various faculty concerning specific areas of interest or from faculty who serve as general advisors. Advisors are also listed in the quarterly schedule of classes.

The Advising Center provides specialized advising for ethnic minority students. The multi-cultural advisor can also assist with

time management and study skill development; arrange for free tutoring and peer advising; and, recommend academic, employment and professional opportunities.

The Advising Center also manages UNIV 101, a required course for entering freshmen that assists students with learning about the university's policies and procedures, selecting a major department, advising for general education and other forms of support. **Final responsibility for meeting graduation requirements resides with the student.**

College Assistance Migrant Program (CAMP)

The College Assistance Migrant Program (CAMP) provides financial and academic support services to freshman students from migrant and seasonal farmworking backgrounds. It is funded by a grant from the Department of Education, Office of Migrant Education.

CAMP is designed to help students succeed as they begin their college careers by recruiting and assisting them through the CWU admissions process and by providing them support during their freshman year. Eligible students receive a variety of services including scholarships, stipends, tutoring, study skills training, mentoring, career planning services and cultural enrichment opportunities.

To qualify for the CAMP program the student must meet the following requirements:

- Be a U.S. citizen, permanent resident, or eligible non-citizen;
- Have freshman standing (fewer than 44 quarter credits);
- Meet criteria to determine migrant or seasonal farmworker status:

Parent (or student, if independent) has worked for at least 75 days in the last 24 months in farmwork such as production of crops, dairy products, poultry, livestock, tree harvesting or fish farming. Farmwork must be primary form of employment and be performed on a temporary or seasonal basis;

OR

Student has participated in the Chapter 1 Migrant Education Program;

OR

Student or parent qualifies for the WIA167 program.

To apply for the CAMP program, call 963-1729 (toll free 1-866-298-4968 x1729) or download an application off the website at www.cwu.edu/~camp.

Career Services

Career Services is a comprehensive career counseling and resource center designed to engage students as active participants in their career development from freshman through

alumni status. The central purpose of Career Services is to help students prepare for academic and career success. The office strives to serve the needs of the individual and create career-related programs and services that are responsive and accessible to students and community members.

Career Services is comprised of Career Counseling, Cooperative Education and Career Employment.

Career Counseling. Career Services offers advising to students deciding on a major or graduate program. Counselors assist students with personal inventories, values clarification, online assessments, resume and cover letter review, interviewing skills, and successful internship and job search strategies. Students and alumni experiencing career transition are welcome to meet with a career counselor.

All students are strongly advised to register online with Career Services at www.cwucareer.com. Registration allows students to view job and internship opportunities, sign up for interviews and register for events. Employers are able to review student resumes online. There is no fee for this service.

Experienced counselors are available weekdays from 8 a.m. to 5 p.m. in Barge 202 on the Ellensburg campus. CWU-Lynnwood and CWU-SeaTac also offer counseling services.

Cooperative Education. Cooperative Education allows students the opportunity to gain work experience along with their college studies. It offers a unique opportunity to combine career, social and personal growth with the educational process. Work assignments provide a variety of experiences with worthwhile work and increasing levels of difficulty and practice. The university cannot guarantee co-op employment to every student. The student must secure the position through regular search, application and selection procedures.

During the internship, students are required to maintain an active working relationship with the employer/supervisor and faculty cooperative education (co-op) advisor. It is the student's responsibility to inform his/her faculty co-op advisor and Career Services when there is a: (1) change of employment status, (2) change in work hours, and/or (3) change of university enrollment status.

Student learning objectives, activities and progress will be monitored and evaluated by the faculty co-op advisor. An S or U grade will be awarded upon completion of the cooperative work experience. To receive a letter grade, a written request must be submitted to Career Services by the faculty co-op advisor prior to registration.

It is the student's obligation to know what is expected of them during a cooperative work experience.

Career Employment. Career Employment, located in Barge Hall, assists graduating

seniors and alumni in locating and securing jobs. Career Employment provides on-campus interviews with businesses, government agencies, non-profit organizations, school districts and the military. Educational placement files are managed by this office. Workshops are offered on resume writing, interviewing skills, placement file preparation, internships and finding jobs in a competitive market. Many books, videos and handouts are available from its extensive Career Library.

Career Employment presents career events, such as Career Quest, that bring together students and employers. Other yearly events include the Majors Fair, P.A.C.E.S., A.C.E.S.S., Construction Management Career Fair and Education Fair. Details are explained on the www.cwucareer.com Web site.

This department offers a two-credit Career Exploration Class, OCED 110, designed to assist students in researching and assessing their career goals through career-related inventories, guest speakers and a career project. This course is offered each quarter.

Center for Civic Engagement

Central Washington University students, clubs, organizations and residence halls are encouraged to explore service interests, from short-term volunteer experiences to intensive capstone service programs, through the Center for Civic Engagement. The primary mission of the center is to provide technical assistance and support to students, administrators and faculty regarding community-based learning opportunities that enhance CWU's co-curricular or curricular initiatives. The staff provides and coordinates service opportunities, within a community setting, for students to apply discipline-specific knowledge which meets thoughtfully-organized educational, environmental, human and public safety needs.

Center for Student Empowerment

The Center for Student Empowerment Center, located in the Samuelson Union Building 218, offers programs and services that support the affective and cognitive development of students in out-of-classroom settings. The Empowerment Center strives to empower students to reach their full potential both academically and personally by facilitating various types of learning opportunities focusing on gender, violence prevention, non-traditional and commuter student issues. We are proud of our collaborative efforts with CWU academic and university departments as well as the Ellensburg community.

Some examples of our educational programs are: gender communication,

sexual harassment, masculinity, domestic violence awareness, Operation E.L.F. (non-traditional student holiday event), White Ribbon campaign, Women's Achievement Celebration, National Women and Girls Sports Day, V-Day Until the Violence Stops campaign and working collaboratively with PROWL (Parents Relationships Older Wiser Learners). Additionally, the center provides information and referral regarding campus and community resources.

Educational Opportunity Center (EOC)

Deciding where to go to college, figuring out how to pay for it and completing all the necessary forms is complicated. EOC is set up to help students gather the necessary information to make good decisions about their future educational plans and think clearly through the available options. EOC is available principally to help low-income adults, who are the first in their family to attend college, work through the admission process. For further information, call (509) 574-6895.

Honor Societies

Nine national honor societies maintain chapters at the university.

Alpha Epsilon Rho is the national honor society for broadcasting. Founded in 1943, for the purpose of emphasizing superior scholarship and creative participation in telecommunication production and activity, it prepares its members for roles as responsible telecommunicators. Membership in Alpha Epsilon Rho is open to undergraduate and graduate students who are making the study of electronic media studies one of their major studies of interest and who meet high standards of scholarship.

The national honor society of Phi Kappa Phi has as its primary objective the recognition and encouragement of superior scholarship in all academic disciplines. Membership is open to undergraduate students, graduate students and faculty members by invitation, with election based on superior scholarship. New members are inducted each spring.

The honor society in education, Kappa Delta Pi, has as its purpose to encourage high professional, intellectual and personal standards, and recognize and honor outstanding achievement in the study of education. Membership is open to undergraduate students, graduate students and faculty by invitation. New members are inducted quarterly.

Tau Iota is Central's chapter of Phi Alpha Theta, the international honor society in history. Membership is composed of students and professors who have been elected upon the basis of excellence in the study and writing of history. The society's objective is

the promotion of the study of history by the encouragement of research, good teaching, publication and the exchange of learning and thought among historians.

Delta Pi Epsilon is a post-baccalaureate honor society for business educators. Its objectives are to improve business education through research, to recognize exceptional research achievements and to publicize research in business education. Membership is open to business educators who meet scholastic criteria and exhibit a commitment to research in business education.

Pi Sigma Alpha (Mu Lambda Chapter) is CWU's honor society for students of political science. This is a national honorary first organized in 1920, with more than 300 chapters throughout the country. Membership is based upon scholastic achievement and a genuine interest in the understanding of politics and political issues.

Phi Sigma Tau is the international honor society in philosophy. Its purpose is to recognize and encourage excellence in philosophic scholarship among students and faculty. Central's local chapter (Washington Alpha) meets periodically to discuss philosophic issues in a spirit of friendship and conviviality. Membership is based on scholastic attainments.

Psi Chi is the national honor society in psychology, founded in 1929 for the purpose of encouraging, stimulating and maintaining scholarship in, and advancing the science of, psychology. Membership is open to graduate and undergraduate men and women who are making the study of psychology one of their major interests and who meet the minimum qualifications. Psi Chi is an affiliate of the American Psychological Association and a member of the Association of College Honor Societies.

Sigma Pi Sigma is the national physics honor society. It was founded in 1921, and now has over 400 chapters nationwide. It is a member of the Association of College Honor Societies and is affiliated with the American Institute of Physics and with the American Association for the Advancement of Science. Membership is open to undergraduate and graduate students and faculty members. Students elected to membership must maintain high standards of general scholarship and outstanding achievement in physics. Besides providing an incentive for all physics students to rise to excellence, the society also encourages physics interest and science literacy in the general public.

Alpha Phi Sigma is the nationally recognized honor society for students in the criminal justice sciences. The society recognizes academic excellence by undergraduates as well as graduate students of criminal justice. The Honor Society is open to students who have a declared Law and Justice major or minor, who maintain a minimum of 3.0 overall GPA on a 4.0 scale, a 3.2 GPA, on a 4.0 scale, in law and justice

courses. The student must also rank in the top 35% of their classes and have completed a minimum of four courses within the law and justice curriculum.

Library (University)

The primary mission of the Library is to support the mission and goals of the university, particularly in its commitment to teaching as the means to facilitate learning. To this end, the university libraries utilize the best available technologies to provide access and delivery of print, digital, and micro-format information, media and audio-visual equipment services to the Ellensburg campus and university centers. Circulation services, the library catalog (CATTRAX), and borrowing from other regional college and university libraries through the Orbis Cascade Alliance (SUMMIT), are available online at <http://www.lib.cwu.edu/>. Also available electronically are access and delivery of information, via interlibrary loan for materials not found in the library collection, as well as services for those at the university centers.

Library personnel are available to give assistance with reference, research, and the location of materials. Individual orientation tours are conducted at the beginning of each quarter and bibliographic instruction sessions are given upon request throughout the year.

The Library contains more than 500,000 books, 700,000 government documents, 88,000 maps, 11,000 audio recordings (CDs and LPs) and 7,000 titles of videos, DVDs, and films. In addition, the catalog provides access to thousands of Web-based publications and sites. Around-the-clock Web-based access is provided to the full text of more than 9,000 journals, magazines and newspapers. A micro-format collection and subscriptions to more than 800 current journal print titles are available to all users on the main campus.

Library faculty and staff are available to provide personal service upon request in the Reference, Serials, Documents, Music, Circulation and Media Circulation departments. Many group study areas and a computer lab are available to users who visit the main library in Ellensburg. Internet connectivity for personal laptops is available on each floor of the library and laptops are available for checkout by students. The Library's services and collections support quality education to students, foster their intellectual, social and ethical development, and show students how to locate, use and evaluate information to equip them for independent, lifelong learning.

Student Support Services

Student Support Services (SSS) is a federally funded TRIO program under the auspices of the Department of Education, as defined by the Department of Education. SSS provides opportunities for academic development, assists students with basic college requirements and serves to motivate students toward the successful completion of their postsecondary education. Students who are first generation, low income or who have a disability are eligible for the program on a space available basis. The program may also provide grant aid to current, active, SSS participants who are receiving Federal Pell Grants and are freshman or sophomore status. The goal of SSS is to increase the college retention and graduation rates of its participants and facilitate the process of transition from one level of higher education to the next. SSS is funded 80 percent by a federal grant from the Department of Education and 20 percent by CWU.

Academic Achievement Programs: Tutoring and Supplemental Instruction (SI)

Individual tutorial assistance is provided for students participating in Student Support Services, Washington Achievers Scholars Program, College Assistance Migrant Program and Multicultural Student Services.

Supplemental Instruction provides student-led, out-of-class study sessions designed to teach students critical thinking, problem-solving, and organizational skills that will enable them to master abstract and complex material. Supplemental Instruction is offered in several classes each quarter and is open to any student enrolled in those classes.

Summer Session

Formal admission to Central as a degree-seeking student is not required for summer study. Enrollment is open to all students, including non-residents. Summer tuition rates for non-resident students is the same as those rates charged to residents.

Summer Session offers a valuable opportunity to expand or accelerate your educational objectives in a relaxed atmosphere. It allows non-degree seeking students an opportunity to pursue new ideas, develop new skills and enhance their personal knowledge.

Courses are offered during a nine-week session, a six-week session and two four-and one-half-week sessions. Special short workshops and seminars for teachers comprise a summer professional development institute. Summer Session courses are offered on a self-support basis. For information about Summer Session, contact Registrar Services at (509) 963-3001.

Testing Services Center

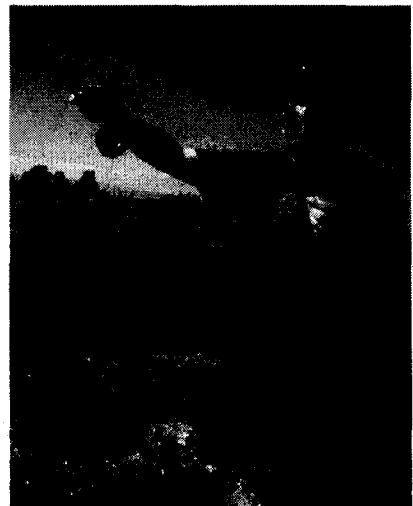
The Testing Services Center provides evaluation and testing services to entering students, continuing students, and for graduates. The center administers approximately 25 different standardized tests. Information and bulletins are available through the office located in Bouillon 125, or call (509) 963-1847.

The tests administered for CWU admittance and placement of freshmen are the GED, ACT, SAT, TOEFL and Compass. The CLEP is also used to award credit to entering freshmen and adults. The center also provides testing support for departments, including major entrance tests (such as the WEST-B) and classroom tests. Professor's multiple choice tests are also processed as a service to each department on campus. SEOIs (Student Evaluation of Instructors) are processed through Testing Services. Testing for English as a second or other language is available for students and faculty.

The tests offered that enable a student to apply for graduate school are the GRE, GMAT, LSAT, MAT, and TOEFL. The NCLEX (National Council Licensure Exam) is also offered to nurses who have finished their course of study and want to be licensed by the state.

Testing services is a Prometric ETS/CBT site and a Prometric IT (Information Technology) testing site. The Information Technology Web site is www.2test.com and the MOUS Test Web site is www.mous.net. A student can sign up for a test with Testing Services online or call for a toll free telephone number.

The center administers personal development assessments useful to students interested in learning about themselves such as the Myers-Briggs Type Indicator and the Strong Interest Inventory.



Campus Life

Campus Life provides a wide variety of extra-curricular, co-curricular and curricular activities for the students of Central Washington University through an assortment of student activities. Various musical groups, speakers and comedians are provided through Club Central programming. The Papa John's Coffeehouse program hosts local poets, musicians, dancers and artists in the SUB Pit for noon and evening entertainment. The Current Issues Program brings speakers, forums and panel discussions on diverse topics. Special Events programs include Homecoming and Family Weekend, Wildcat Week, Boo Central, Santa Comes to Central and Ware Fair.

Associated Students of CWU

The Associated Students of Central Washington University (ASCWU) is the student government board advised by the director of Campus Life. Executive responsibility is vested in seven members of the Board of Directors and the director of Campus Life. The board members are elected by the student body to serve as policy development officers. The ASCWU is an integral part of the total decision-making process of CWU because it is a vehicle from which students may share different views. Also included in this area is advisement and support for university student clubs, averaging 80 clubs per year.

The Center for Excellence in Leadership (CEL)

The Center for Excellence in Leadership (CEL) provides a broad-based leadership education for the CWU campus and community. This includes individualized training and program development, resources, services and recognition.

The CEL involves more than 2,000 students each year. In the spirit of the CWU equal opportunity statement, opportunities exist for all students. The CEL works collaboratively with academic departments to provide CWU students with a variety of co-curricular programs.

Current program, affiliation, and recognition offerings: Educational programs include Leader Lab, time constrained team-building adventure exercises; The Leadership House, a live-in leadership experience for accepted residents of Kennedy Hall; A Seminar Series of workshops that focus on communication, conflict resolution and personal effectiveness; and a Leadership Library that consists of books, manuals, and guides to help students realize personal leadership potential. Additionally, CEL staff is able to provide the CWU campus with retreat facilitation to improve organizational effectiveness. Affiliation includes Omicron Delta Kappa (ODK), a national leadership

honor society. Leadership recognition is available through ODK, quarterly programs, and through CEL's signature program: Evening of Recognition, an awards banquet that honors campus leaders every spring.

Plans for future programs include development of a leadership minor, initiation of a regional conference for college student leaders, and leadership certification.

Early Childhood Learning Center (ECLC)

Campus Life provides the ECLC program that is licensed for children aged 2 to 8. It is located in the Brooklane Village Multi-Purpose Center. Children may attend two to five days per week, Monday through Friday. The program consists of learning activities, especially designed for small children, including music, stories, physical activities, language, science and math experiences, games, puzzles, blocks and dramatic play. Days of operation follow the university calendar. Call 509-963-1744 for information, Fax 509-963-1124.

Recreation/Intramural Program

The Recreation/Intramural area consists of an intramural sports program designed to provide opportunities for all members of the university to participate in women's, men's and co-ed team sports. Outdoor Programs are designed to answer the needs of CWU students in their desire for outdoor recreation and leisure-time programs. Special events include assistance with major events such as Family Weekend and Wildcat Welcome Weekend; the Tent-n-Tube rental shop provides a variety of outdoor recreation equipment at reasonable prices to students, staff, faculty and alumni of CWU; Ticketmaster, which can be used for buying tickets to major concerts and sporting events; Kids-N-Things day camp, a summer quarter day-camp developed for children, ages 5-13, of students, staff and faculty; and Co-Recreation, which makes available the gym and PE facilities for student use. Equipment checkout, the weight room and the racquetball courts are also made available through this program. After-School Kids Program offers an alternative for students with dependents by providing supervision after school hours.

Samuelson Union Building

The Samuelson Union Building (SUB) is the community center of the university, serving all members of the "college family." The SUB represents a building, organizations and programs. It provides services, facilities and educational, cultural and recreational programs that enhance the quality of college life.

The SUB houses the following offices and departments: ASCWU, Campus Life, Cesar Chavez Theatre, Center for Civic Engagement, Central Cafe, Cats Espresso Bar, Wellington's Lair, Education Center, Ballroom, Diversity Center, Games Room,

Information Booth, KCWU Radio, Non-Traditional Student Lounge, Publicity Center, Scheduling Center, Tent n Tube/Ticketmaster, University Recreation and Intramurals, University Store, Center for excellence in Leadership and Civic Engagement Center. It also has 14 meeting rooms, and the SUB "Pit" entertainment center.

Dining Services

CWU Dining Services is dedicated to customer satisfaction. Our mission is to provide exceptional dining services to the campus community with an emphasis on the importance of nutrition to support a healthy lifestyle.

All students living in the residence halls are required to select a meal plan. The plans are set up as a prepaid dining debit account to purchase meals or snacks at any campus dining location. Students living off-campus may also purchase an off-campus meal plan for the convenience of dining and buying beverages and snacks on campus.

As you will see, we are under construction! What this means to you is that you can look forward to a new student union building and recreation center that includes your main dining hall. In the meantime, you will experience our standard excellent food service offered at residential and retail dining centers located around campus.

Residential Dining Centers

You have the opportunity to dine at up to three distinctly different dining centers operated for students both living in the residence halls and off campus. You may select from two styles of daily meal service. The first style, all-you-can-eat dining, features different entrée selections at each meal every day and is complemented by a healthy salad bar and an array of beverage and dessert selections.

Ala carte dining provides the option to individually purchase food and beverage items that you want to eat. This style of dining features menu stations that customers can select from and look forward to coming back to.

Breakfast, lunch and dinner are offered Monday through Friday; brunch and dinner are served on Saturday and Sunday and a late-night menu is offered Sunday through Thursday during the academic year. Summer services are operated on a modified schedule.

Convenience Store

Dining Services operates a convenience store on campus to support your dining needs. The store features a wide selection of popular beverages, snacks, frozen entrees and novelties, along with health and beauty aids and is open seven days a week.

SUB Dining Locations

Dining Services operates additional dining locations in the Samuelson Union Building to meet the needs of a greater mix of campus constituents and university guests. These include the Central Café, where you will find a variety of choices including hamburgers, sandwiches, a Taco Bell kiosk, tossed-to-order salads and the daily special. There are two espresso bars in the SUB as well, CAT'S Espresso and Wellington's Lair, featuring all of your favorite espresso drinks and snacks. Last but not least, you will find Dining Services' pizza place located in the SUB, designed to provide you with an array of delicious pizza, calzones, pasta bar and grinder sandwiches. You may choose to use your dining debit account to pay retail prices for purchases at these locations.

Nutritious Foundations

Dining Services offers nutritious menu selections based on the food guide pyramid to support your healthy lifestyle on campus. We encourage you to adopt a diet rich in balance, variety and moderation by exploring the nutrition foundation that Dining Services provides in all dining arenas.

Special Events

Several special dining events are offered quarterly to enrich your dining experience. Some of these events include the Welcome Back BBQ on the first day of class, a holiday season buffet, a seafood buffet extravaganza, theme and ethnic dinners, the Student Appreciation BBQ and the commencement luncheon.

Employment Opportunities

Dining Services is the largest employer on campus and annually hires between 200 to 300 students on a part-time basis. Consider joining our service and production team where you will meet new friends and earn cash for school expenses or social activities.

CWU Dining Services is a proud member of the National Association of College and University Food Services and an active supporter of the academic mission of the University through participation in many out-of-classroom events and activities held throughout campus. For additional information about CWU Dining Services, please visit our web page at <http://cwu.edu/~dining>.

Disability Support Services (DSS)

Disability Support Services (DSS) facilitates access to university programs, activities and services for students with disabilities. Utilizing documentation of disability and information obtained in consultation with the student, DSS staff assesses the affects of a student's disability on his/her ability to access the educational process and identifies

reasonable academic adjustments/accommodations. In addition, DSS staff works to sensitize university faculty and staff to the needs of students with disabilities and helps students obtain the materials, equipment, and assistance necessary to successfully pursue their education. Students wishing to request disability accommodations are responsible for initiating contact with DSS.

While appropriate accommodations are determined for each student on an individual basis, following are examples of the types of accommodations available: textbooks and academic materials in accessible formats (audio cassette, large print, braille), alternative examination procedures, sign language interpreters, tape recorded lectures, note taking assistance, early registration, priority snow removal, special classroom furniture, adaptive technology, assistance with library research, and temporary disability parking permits.

Diversity Education Center

The Diversity Education Center encourages, enhances and supports a campus environment that welcomes, celebrates and appreciates cultural differences and similarities. We offer programs, events and services. Our programming focuses on diversity, social change and global equity. All students are encouraged and welcome to join our team and "be the change you wish to see in the world."

Financial Aid

Each year approximately 75 percent of CWU students receive financial aid. To be eligible for federal aid a student must be a U.S. citizen, a permanent resident, or eligible non-citizen.

Financial aid is available to matriculated students seeking a degree or certification in an eligible program. Most financial aid programs require a minimum of half-time enrollment, which is six (6) credits at the undergraduate level and five (5) credits at the graduate level. Students who have a first baccalaureate degree and are not admitted to a Master's program will be classified as a post baccalaureate student. Post baccalaureate students are eligible for federal loans at the upper-division undergraduate level.

Students must apply and be accepted for admission to the university (matriculated) to receive financial aid. Students and their families must complete a Free Application for Federal Financial Aid (FAFSA). Paper copies are available in the Financial Aid Office and at most high schools or libraries. The Web version is available at www.fafsa.ed.gov.

The application should be submitted to the federal processor as soon as possible after Jan. 1. March 1 is the cutoff date for priority consideration for limited gift aid. Accurate preparation of the FAFSA and timely

response to all requests for additional information or documentation are critical.

Students who have been admitted to the university and have listed Central Washington University Title IV code #003771 on the FAFSA will have a Student Financial Aid File delivered to the university electronically. Once that file has been reviewed and verified, the student will receive an award letter. The award letter will indicate the estimated student budget, the federally determined expected family contribution, and an offer of aid including the type and amount. If you wish to reduce or cancel the amount of your loan, you must indicate the changes on the form provided, sign it, and return it to the financial aid office immediately, or submit a request for an administrative change electronically using Student Financials, Admissions, Financial Aid, Academic Progress and Records Information (SAFARI). Loans are disbursed quarterly in equal amounts. If you have not already signed a master promissory note, you may sign electronically at: <http://dlenote.ed.gov>.

Students are expected to maintain "good academic standing" while receiving financial aid. A minimum CWU cumulative GPA of 2.0 is required for undergraduates after two year attendance; post-baccalaureates are required to maintain a 2.0 cumulative GPA; and a minimum cumulative GPA of 3.0 is required for graduate students. Financial aid recipients are required to make reasonable progress toward a degree. All students are held to a maximum number of attempted credits equal to 150 percent of required credits for the declared primary major. A student must complete a quarterly minimum of 6 credits (undergraduate) or 5 credits (graduate) to maintain eligibility. Students are required to meet an annual credits completion requirement based on the funded enrollment status. For example, an undergraduate student who receives aid as a full-time student for the academic year, will be required to complete 36 credits, 27 if funded at three-quarter time, and 18 if funded at half-time. Graduate students are expected to complete 30 credits if funded at full-time, 21 at three-quarter time, and 15 at half-time. Repeat courses, audit, credit-by-examination, grades of incomplete, failure, no show, or withdrawal do not meet the annual earned credit requirement. A copy of the Satisfactory Progress Standards for Financial Aid will be sent with the award notice. Additional copies are available in the Financial Aid Office and on the Web.

Additional financial aid information is available in the Financial Aid Office, Barge 115, the Student Employment Office, Barge 103, the Financial Aid Resource Room, Barge 102, and through the financial aid offices at each University Center, at (509) 963-1611, finaid@cwu.edu, or on the CWU financial aid homepage <http://www.cwu.edu/~finaid/>

University Housing and New Student Programs

University Housing provides well-maintained housing facilities with an emphasis on student development as part of the University's academic environment, and works to augment classroom instruction with a learning environment that is supportive of students' educational goals, personal and interpersonal growth, and cultural awareness.

Programs such as Discover! New Student Orientation, Wildcat Welcome Weekend and Wildcat Connections are part of New Student Programs.

CWU is a residential university with most students living on or near campus. The residence halls and apartments can house 3,000 students. CWU's residence halls offer students a variety of quality living experiences and options.

The residences are within a few minutes walk of any classroom, library, or dining hall, which offers considerable convenience and flexibility to students' daily lives. Residence hall staff provides crisis intervention and educational, cultural, social, and community services programs; as well as coordinating behavioral problem-solving interventions in cooperation with the Office of the Vice President for Student Affairs and Enrollment Management.

The residence halls offer a diverse selection of communities and environments. The residence halls, which house 35 to 255 occupants, offer programs and environments to enhance classroom experiences. Furniture, basic FM-TV cable service, Internet hookup, basic telephone service, utilities and coin-operated laundry facilities are also provided. Many halls have their own pool table, piano, or ping-pong table. All residence halls are smoke free.

Students majoring or minoring in Education, Natural Sciences, Flight Technology, Music, Arts and Humanities, or participating in the Douglas Honors College, may request a residence hall offering a living-learning enrichment opportunity. Hall staff and faculty from these departments collaborate to provide residents educational and social activities that integrate their field of study, enhancing their residence hall living experience.

Computer labs and fitness centers staffed with trained attendants are available to all students at various convenient locations throughout the campus. Exercise equipment includes free and universal weights, exercycles, stair climbers, cross-country ski machines and sound systems.

In the belief that the University is a total learning experience, Central requires all freshmen who are single and under twenty (20) years of age to live on-campus, in the

residence halls, for one academic year. Running Start students under twenty (20) years of age, regardless of class standing, must also fulfill the Live-In Requirement.

Central Washington University changed its procedure for student alcohol violations involving underage drinking. Underage drinking is a violation of Washington State law as well as the CWU Student Judicial Code governing the behavioral conduct of students. The University has a comprehensive alcohol education and prevention program. Parental notification is one part of CWU's comprehensive sanctioning procedure for underage alcohol use.

CWU also maintains 460 apartments (studio, one, two, or three bedrooms) designed for single students and students with families. The apartment complexes offer activities for residents that focus on the needs and priorities of their residents. Single student complexes feature programs and facilities that assist students in developing healthy, independent lifestyles. These programs might include wellness, self-defense, cultural awareness, lifestyle planning, career planning, and recreation. The communities in the family-student apartment complexes enjoy programming and activities tailored for the needs and interest of families and older students. Many activities for children and families are presented, such as: holiday events, child safety awareness programs, domestic violence programs, and career planning.

At different times of the year, demands for apartments may exceed availability; for this reason, waiting lists are provided. Applications are accepted from students who have not been officially accepted for admission to CWU, but who plan to attend classes during the dates listed on their application forms. To be eligible for apartment housing, one must be currently enrolled in and must maintain at least 12 credit hours of coursework. Students who are required to live in residence halls are not eligible to live in the apartments. Each tenant is required to sign a lease, which provides for renting an apartment on a month-to-month basis. Written notice must be given at least 30 days prior to vacating an apartment. Pets are not allowed in any area of CWU housing.

Discover! New Student Orientation: New students with less than 45 credits, and all students who participated in Running Start, are required to attend an on-campus orientation and registration program. For students starting Fall quarter, this program takes place on a variety of dates in June and July. For Winter quarter students it takes place in December and for Spring quarter students it takes place in March. New Ellensburg campus students with 45 or more credits are urged to attend the transfer

orientation. Orientation for transfer students coming Fall quarter takes place in July. For those students coming for Winter or Spring quarter the orientations take place in December and March respectively. Students attending a campus other than Ellensburg need to contact the appropriate center for information about their orientation and registration programs.

Students who do not participate in early registration may register for classes at the beginning of each quarter.

Scholarships

Scholarships are gifts of money, which do not have to be repaid. Central Washington University's Scholarship Office (Ellensburg Campus, Barge Hall Room 102) makes available the most recent scholarship application information at the web site www.cwu.edu/~scholar.

Scholarship eligibility is based on a variety of criteria including, but not limited to, academic proficiency, specialized talent, community service, leadership, and financial need. College and departmental selection committees as well as the Financial Aid Office select scholarship recipients. To be fully considered for all scholarship opportunities students should complete the FAFSA (Free Application for Federal Student Aid, www.fafsa.ed.gov) and any college or departmental scholarship applications for which the student is eligible that are available in the Scholarship Office. In addition, students with talent in Athletics, Art, Music, and/or Theatre should contact the department(s) directly for specific audition or exhibition opportunities. Most institutional merit aid is awarded to meritorious students who submit a FAFSA (Need is not always a criteria.)

Community sponsored scholarships include scholarships and awards for which the recipients are chosen by organizations outside the university. Each organization establishes its own eligibility criteria and application process. Information on many of these organizations can be found at the scholarship web site (www.cwu.edu/~scholar) or by contacting the organizations directly. Recipients are to inform the CWU Financial Aid Office if they are receiving an award from a community organization. Checks should be made payable to "Central Washington University" for the benefit of "student's name and identification number" and sent to the CWU Financial Aid Office, 400 E. University Way, Ellensburg, WA 98926-7495.

Scholarships are considered an educational funding source and may change a student's eligibility in other state or federal aid programs.

Student Employment

CWU hires over 2,000 students to work on campus each academic year. Work allows students to meet a portion of their college expenses and gain valuable work experience. The Office of Student Employment posts notices for on-campus and off-campus job openings on the bulletin board on first floor Barge Hall and on the student employment Web site. Summer job opportunities are also posted. Visit the Student Employment Office home page at: cwu.edu/~seo for additional information, and to view the on-line job board. Please visit the financial aid office regarding work-study opportunities. Students must submit a tutorial request to be considered for work study. See the CWU financial aid homepage for details at <http://www.cwu.edu/~finaid/>

Student Health Center, Counseling Center and Wellness Center

A staff of professionals offers a variety of medical, psychological and wellness services for CWU students. Students who are registered for six or more credits are required to pay a mandatory health and counseling charge and are eligible for services. There may be additional charges for specific services, and all students are encouraged to check with the center regarding fees and charges each year. Always call for an appointment.

Services are offered at the Health and Counseling Center Building. Hours are from 8 a.m. to 5 p.m. Monday through Friday; and until 7 p.m. Tuesday and Thursday, by appointment only. The Center is closed on holidays and during breaks. Health/medical services are also available on Saturdays from 9 a.m. - 1 p.m. except during breaks and surrounding holidays. Summer hours are 9 a.m. - 3 p.m. when classes are in session.

Student Health Center (963-1881) A complete out-patient, on campus facility is available to registered students. Service is provided by the medical staff, which consists of a family practice physician, certified physicians assistants, certified nurse practitioner, nurses, and laboratory x-ray technicians. The Student Health Center is accredited by the Accreditation Association for Ambulatory Health Care, Inc.

The staff provide routine and urgent-care services, which include: direct care of medical problems such as illness, injuries and infections such as colds, flu, and sexually transmitted diseases; routine physical examinations, sports physicals, pap smears, pregnancy testing; and diagnostic laboratory tests and x-rays. In keeping with the educational mission of the University, special emphasis is placed on education regarding treatment and prevention of illness.

Medical appointments are taken by phone from 7:30 a.m. to 4:30 p.m. Students are encouraged to make their appointments as early as possible for the best selection of appointment times.

Emergency medical services are available at the Kittitas Valley Community Hospital Emergency Room when the Center is not open. Emergency room costs are at the student's expense. A university-sponsored student accident and health insurance plan is available and recommended to help defray medical costs. The Student Health Center is accredited by the Accreditation Association for Ambulatory Health Care, Inc.

Counseling Center (963-1391) The counseling staff consists of psychologists and masters-level counselors who function primarily as generalists, but each also has areas of expertise and interest. In keeping with the role of the university as a center for education, the service includes predoctoral interns who work under the supervision of the senior staff.

Services offered include personal counseling and group counseling for issues such as relationship difficulties, anxiety, or depression; help with study skills and career decisions; groups on a variety of topics such as eating disorders, depression, attention deficit/hyperactive disorder, relationship issues and special programs for campus groups on request.

Wellness Center (963-3213): the Wildcat Wellness Center is located in Sue Lombard, Suite 111-113. Services and programs delivered through the Wellness Center include: Alcohol/drug screenings and prevention; "Prime For Life" (OCTAA) classes; Peer Education Programs, phone 963-3234; Safe-Ride/Escort Program, phone 963-1897; sexual assault/harassment prevention and response coordination; lifestyle management; health education and referral services.

Sexual Assault Response Coordinator: This service is provided by the Director of the Wellness Center. Students may call 963-3214 and leave a confidential message and/or drop by the Wellness Center at Sue Lombard Hall, 111-113. Services include confidential counseling, referral, advocacy, information and crisis response for victims, survivors and significant others.

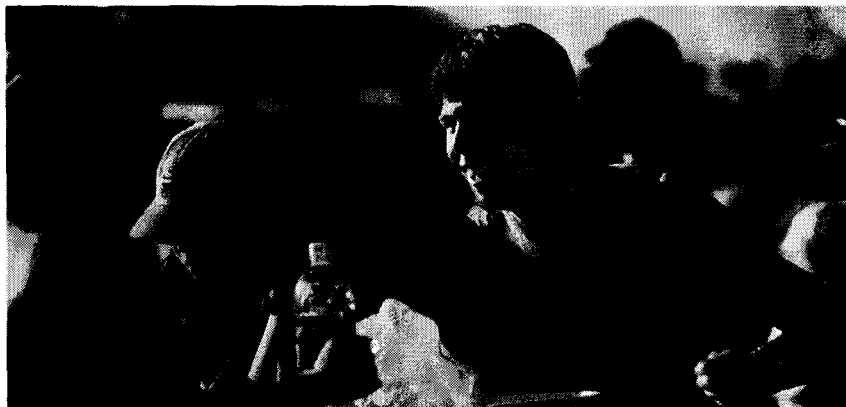
The Students for an Assault Free Environment (SAFE) peer education program is sponsored by the Wellness Center and advised by the Wellness Center's Health Educator. They can be reached by phoning 963-3213.

University Store

The University Store sells textbooks, general interest and reference books, magazines, computer software, electronics, emblematic clothing and gifts, school and art supplies, greeting cards and gifts, health and beauty aids, stamps, and snack foods. The store also provides fax and laminating services. Contact the University Store at (509) 963-1311 or on-line at: www.cwu.edu/~store.

Veterans Affairs

The Office of Veterans Affairs is located in Mitchell Hall. Students wishing to receive education benefits from the Department of Veterans Affairs (DVA) must contact the Veterans Affairs Office. Notification is NOT automatically sent to the DVA when a veteran or other eligible person enrolls. Central Washington University's programs of study are approved by the Higher Education Coordinating Board's State Approving Agency (HECB/SAA) for the enrollment of persons eligible to receive educational benefits under Title 38 and Title 10, U.S. code.



Archival Services

The Archives program, through its Central Washington historical collection of public records, manuscripts and photos, offers both undergraduate and graduate students an opportunity for primary archival research on local and regional topics. The collection is designed to preserve selected evidential materials of historical importance and seeks to encourage original research in the humanities and the social sciences. The History Department facilitates archival research in northwest and local history through History 301, 395 and 496. The regional branch of the State Archives helps researchers utilize its collections, while the State Archives in Olympia loans collections to the regional archives and affords opportunities for archival training and internships. Moreover, for the general public, Central's regional archives seeks to serve a broad clientele, including: public officials from city, county and state government seeking help on archival records retention; personnel from libraries, museums, local historical societies and private archival collections in need of advice on archival techniques; private citizens and local groups interested in historical architectural preservation in central Washington.

Center for Spatial Information

The CWU Center for Spatial Information (CSI) was established in 1999. CSI encourages, supports and coordinates research project opportunities for students and faculty using hardware and software technologies that gather and analyze "spatial" information to solve problems in the social sciences, natural sciences and business. Geographic Information Systems (GIS), high-precision Global Positioning System (GPS), ground-penetrating radar, precision conventional laser surveying, digital microscopy, and satellite image processing are some of the spatial technologies used by CWU faculty and students.

Major cooperating facilities and projects currently include the Pacific Northwest Geodetic Array (PANGA) GPS Data Analysis Facility, monitoring the movement of the earth's crustal plates in California, Idaho, Montana, Nevada, Washington and Oregon; and the GIS Laboratory (in Lind Hall) where a variety of undergraduate and graduate GIS courses are taught and numerous large and small research projects conducted using state of the art computing systems. Typical GIS applications include projects in archaeology, field biology, geology, natural resource studies, and urban planning. CSI is responsible for carrying out the mission of the Department of Agriculture GIS Program for spatial technology

education and transfer to local governments, through the Washington Office at CWU, one of seven national GISP centers.

CSI encourages creative, interdisciplinary uses of spatial technology, and actively works with the private and government sectors to identify problems to which CWU personnel and equipment can provide effective solutions. CSI's homepage is: www.cwu.edu/~csi.

Central Washington Archaeological Survey

The Central Washington Archaeological Survey (CWAS), with offices in Farrell Hall, is a research and public service office that is part of the Department of Anthropology. An advisory board which includes the Dean of Graduate Studies and Research, the Dean of the College of the Sciences and the Chair of the Department of Anthropology and Museum Studies, provides direction and support for CWAS activities. CWAS conducts archaeological investigations in the central counties of the state and promotes public involvement in the identification and protection of regional archaeological resources. Closely integrated with academic programs in anthropology, CWAS involves faculty and students in research projects funded through external grants and contracts. CWAS cooperates with state and federal agencies, Native American tribes and nations, professional archaeologists throughout the state, and state and local archaeological societies to study and preserve Central Washington's archaeological resources.

Geographic Information Systems Laboratory

The CWU Geographic Information Systems (GIS) laboratory supports computer hardware/software systems for analysis of spatial data (maps, aerial photos, landscape images, digital terrain data, etc.). The laboratory provides an excellent teaching and research facility for faculty and students from a variety of fields, including anthropology, archaeology, biology, geography, geology, land-use planning, resource management and sociology. In addition, the laboratory offers contract and consultation services to public and private agencies concerned with GIS applications. The laboratory is located in Lind Hall.

Additional information can be found at <http://www.cwu.edu/~gis/>

Information Technology Services

Central Washington University's multi-platform, distributed computing environment provides continuous

computing power, access and services through a high speed fiber backbone from anywhere on the Ellensburg campus as well as from its university centers. Students, faculty and staff use contemporary computing resources on client-server platforms, centralized computers, special purpose labs, and the Internet.

Faculty and students have easy access to contemporary hardware and software in 33 general purpose and discipline specific computer labs spread throughout all of the major academic buildings on campus. Virtually every dorm room is equipped with an Ethernet connection providing free Internet services for those students that bring computers to campus. Students who opt to live off campus can take advantage of free modem connections. In all cases, they can access their email and centrally maintained file services directly via internet connections.

Wireless access to the Internet is available through laptop checkout and personal laptop use in the SUB and Library commons area. Wireless expansion is a continual process with installation of wireless in the Library, outdoor areas, and several other buildings during 2004. Expansion will continue in 2005. This is part of a planned expansion of wireless networking throughout the University.

The Information Technology Services department (ITS) provides student computer lab management services; telephone services to the Ellensburg campus and its centers; networking and computer operations and services; maintenance and repair of university-owned computers; coordination of new purchases; desktop support; help desk services; and applications development and maintenance. ITS staff members work closely with all segments of the university to ensure that information technology is broadly developed, acquired, used and available to all students, faculty and staff. ITS information is available on the web at www.cwu.edu/~its and ITS can be contacted at 509-963-2924.

Public Safety and Police Services

Business Phone: (509) 963-2959

After Hours Non Emergency: (509) 925-8534

Emergency Phone: 911

Fax: (509) 963-2994

Central Washington University's Police Agency operates 24 hours a day, 365 days a year and is a general authority state police force. The department employs 12 armed police officers who are fully commissioned by the state of Washington and have the same arrest and investigative authority as other law enforcement officers in the state. All of the officers are graduates of the Washington State Criminal Justice Training Commissions Basic Academy, and each has

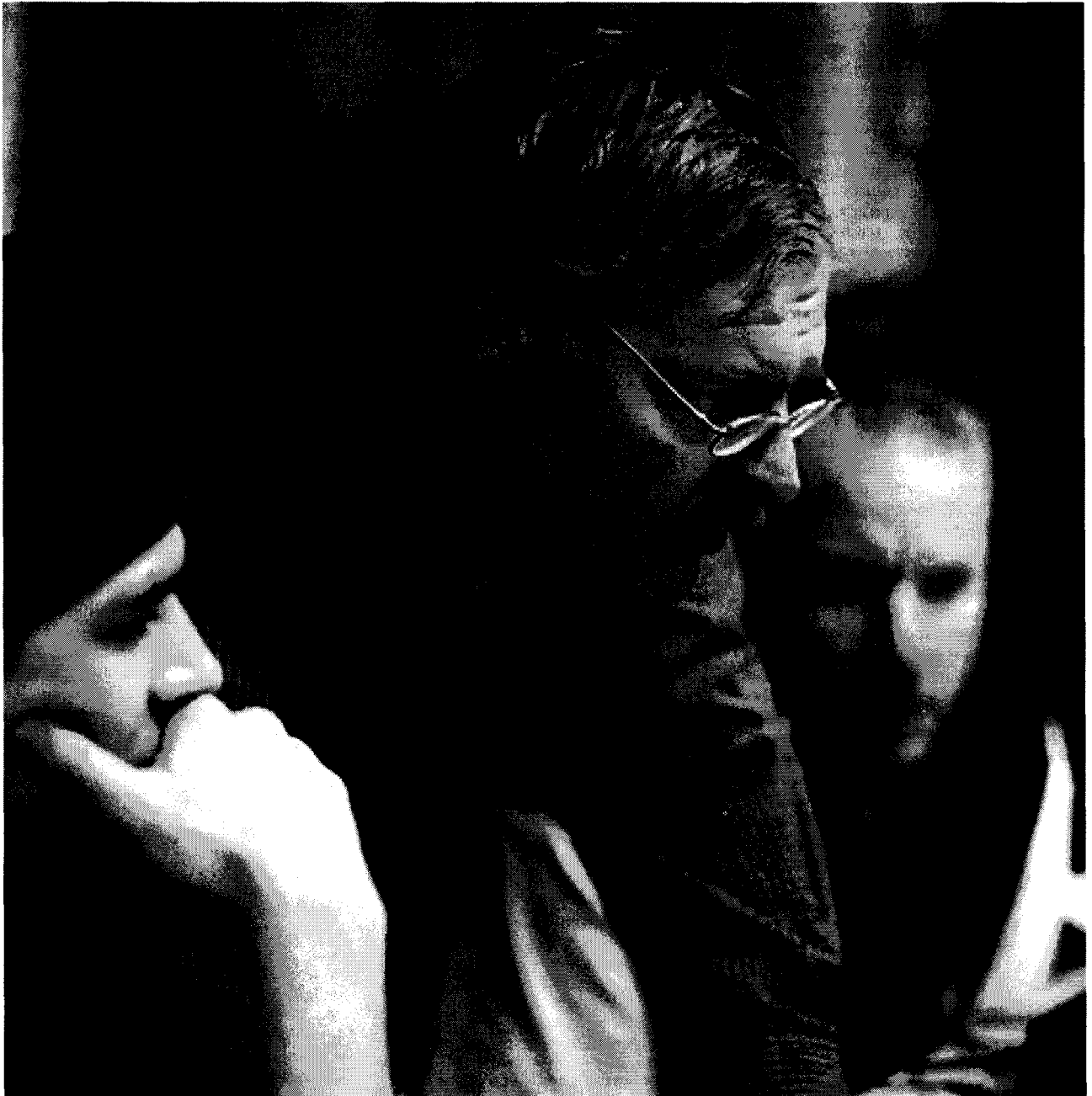
numerous hours of annual specialized police training. The majority of the officers hold B.A. degrees in Law and Justice or a related field of study. The department has the primary responsibility for law enforcement on Central's campus and works closely with all other law enforcement agencies. Commissioned officers patrol the campus 24 hours a day with emphasis on crime prevention and education. In addition to the commissioned officers, the department employs two parking enforcement officers, a

secretarial staff, a switchboard operator, and student employees. The department encourages the reporting of all crimes.

Each year the officers conduct between 60 and 75 crime prevention programs for the University community, with the majority held in the residence halls for the benefit of the student population. These programs include Personal Safety, Rape Awareness and Prevention, Operation I.D., Bicycle Registration, Drug and Alcohol Use/Abuse, and related crime prevention techniques.

Outdoor emergency telephones have been installed at the entrances to residence halls, while other strategically located "blue light" emergency telephones are installed throughout campus. Each phone has an emergency button which is a direct line to the KITCOM Dispatch Center.

University police officers respond to all campus emergency calls placed through the KITCOM Dispatch Center.



Central Washington University has six university centers that provide programs on community college campuses in communities in the Puget Sound and Eastern Washington regions. The centers offer upper division (300- 400-level) and graduate level coursework leading to baccalaureate and masters degrees. The centers are designed for students who have completed their Direct Transfer Agreement (DTA) associate programs or most of their General Education requirements. Day and evening classes are offered to accommodate the needs of time- and place-bound students. Visit the University Centers web-site at cwu.edu/centers/index.html. Approved degree programs being offered include:

University Center Locations and Programs

CWU–Lynnwood

Edmonds Community College
Snoqualmie Hall
20000 68th Ave. W.
Lynnwood, WA 98036
(425) 640-1574

Degree Programs:

B.S. Accounting
B.S. Business Administration
B.S. General Studies – Social Science
B.A. Law & Justice, Master of Professional Accountancy
B.S. Safety & Health Management
B.A.Ed. Special Education Major with Teaching English as a Second Language minor

Minors:

Psychology
Law and Justice
Business Administration
Economics
Computer Science

Certificates:

Supply Chain Management Certificate,
Teacher Certification/Math

CWU–Moses Lake

Big Bend Community College
7662 Chanute Street, Rm 1204,
Moses Lake, WA 98837
(509) 762-3603

Degree Programs:

M.Ed. Master Teacher
Courses Offered Toward B.S. – Accounting,
Business Administration

Certificates:

Professional Teacher Certification

CWU–SeaTac

2450 S 142nd Street
SeaTac, WA.
Mailing address:
P O Box 69288
SeaTac, WA 98188-9288,
(206) 439-3800

Degree Programs

B.S. Accounting
B.S. Business Administration
B.A.Ed. Early Childhood/Elementary Education
B.A. Ed. Elementary/Science Education (Green River)
B.S. General Studies – Social Science
B.A. Law and Justice
M.Ed. Education Administration
M.Ed. Master Teacher
M.S. Engineering Technology

Minors

Psychology
Law and Justice
Business Administration
Economics

Certificates

Supply Chain Management Certificate
Principal Certification

CWU–Pierce County

Pierce College
Olympic Building, Third Floor
9401 Farwest Dr. S.W.
Lakewood, WA 98498-1999
(253) 964-6636

Degree Programs

B.S. Electronic Engineering Technology (Puyallup Campus)
B.A. Law and Justice (Ft. Steilacoom Campus)

CWU–Wenatchee

Wenatchee Valley College
604 Ringold,
Wenatchee, WA 98801
(509)665-2600

Degree Programs: B.A.Ed. Elementary Education, M.Ed. Master Teacher
Courses Offered Toward B.S. – Accounting, Business Administration

Certificates: Teacher Certification, Professional Teacher Certification

CWU–Yakima

Yakima Valley Community College
Deccio Higher Education Center
1004 S 12th Ave., Yakima, WA 98902 (509) 574-6894

Degree Programs:

B.A.Ed. Elementary Education
B.A. Law and Justice
Courses Offered Toward B.S.: – Accounting, Business Administration
M.Ed. Master Teacher
M.Ed. Reading Specialist

Minors

Law and Justice
Early Childhood Education

Certificates

Professional Teacher Certification
Teaching and Linguistic Diversity

For more information about the University Centers, contact Margaret Badgley, Assistant to the Provost for University Centers and Community College Relations.

Phone (509) 963-1407
E-mail badgleym@cwu.edu



General Information

Central Washington University's policies and practices affirm and actively promote the rights of all individuals to equal opportunity in education and employment without regard to their race, color, religion, national origin, sex, sexual orientation, age, marital status, disability or status as disabled or Vietnam era veterans. The University administers an affirmative action program for employment purposes and complies with applicable federal, state, and local laws, regulations, and executive orders. Policy statements on affirmative action, gender equity, sexual harassment and discrimination grievance procedures are located in Appendix A. The person responsible for institutional compliance with various federal and state laws and institutional policies dealing with discrimination is Nancy E. Howard, Director, Office for Equal Opportunity, Barge Hall 211, (509) 963-2205 or TDD (509) 963-2207.

Central Washington University offers admission to qualified students as they apply. All applicants must submit a completed CWU on-line or paper admissions application (the on-line application is preferred) along with a non-refundable processing fee of \$35 in the form of a check or money order. To apply on-line, please visit www.applyweb.com/apply/cwu/index.html.

For fall quarter, the Office of Admissions responds to applications soon after December 1 for students who apply before November 15 and within 4-6 weeks for those who apply later. The deadline for Fall Quarter for Freshmen and Transfers is May 1st. For the most current information and admissions deadlines for other academic quarters, please visit www.cwu.edu/~cwuadmis/.

Freshman Applicants

Freshman applicants (students currently enrolled in high school or high school graduates who have earned fewer than 40 college credits) must send official copies of all high school and college transcripts as well as ACT or SAT scores to the Office of Admissions. Freshman applicants are automatically offered admission if they meet a minimum admissions index, which is determined by a formula that weights high school GPA and standardized test scores in a ratio of approximately 3:1. The formula was developed by the Higher Education Coordinating Board of the State of Washington and is a reliable predictor of academic success. For the 2005-2006 academic year, the minimum admissions index for is 28. Freshman applicants must also complete a core course of studies in high school as proscribed by the Higher

Education Coordinating Board (HECB). Central Washington University recommends that students take additional courses to prepare them for university level work. Below are the required core courses:

Required

English	4 years
Mathematics	3 years, including algebra, geometry, advanced algebra/trigonometry (or Integrated 1, 2, 3)
Social Studies	3 years, including U.S. history & government
Science	2 years, including 1 year of laboratory science (biology, chemistry or physics)
Foreign Language	2 years of a single foreign language
Fine & Performing Arts	1 year of art or music or an additional year of any of the above categories

Running Start

Students who have participated in the Running Start program must meet both freshman and transfer minimum requirements, and must submit either ACT or SAT scores and official copies of high school and college transcripts. Running Start students are eligible for all freshman scholarships and must live on-campus for one calendar year regardless of the number of college credits earned.

Homeschool Applicants

Admissions applications for Homeschool students are evaluated on an individual basis. Students will be required to submit ACT or SAT scores, as well as any high school, homeschool, or college transcripts available. In addition, they may be asked to submit additional information or essays.

Transfer Applicants

Transfer students who have earned 40 or more college-level credits (27 semester credits) must send official copies of all college transcripts to the Office of Admissions. Transfer students must meet a minimum cumulative GPA of 2.5 for an automatic offer of admission. Transfer applicants who do not meet this minimum will be considered for comprehensive review

through the Admissions Review Committee. Students who have earned the Direct Transfer Associate of Arts or Associate of Science degree will receive priority consideration for admission. A current list of DTA degrees is available online at www.cwu.edu/~cwuadmis/dta.html. For current information and application deadlines, visit www.cwu.edu/~cwuadmis.

Comprehensive Admissions Review

Central Washington University recognizes that many factors affect grades and test scores; therefore, C.W.U. utilizes a comprehensive admissions review system. Applicants who have marginal admission indexes or a low cumulative transfer G.P.A. are invited to include with their applications any statements or information that they believe will more fully define their potential for academic success.

Other students who may also be reviewed through the comprehensive review process include those who are 18 or older and have neither completed high school nor 40 credits of college level but have earned General Education Development (GED) certificates, as well as students 25 or older who have poor academic histories and have not attended school recently. Applicants may be required to complete supplemental application forms. In addition, they may be asked to submit additional information or essays.

International Students

Central Washington University welcomes qualified students from other countries. Students demonstrating the greatest potential for success at the university level may be admitted after a thorough review and evaluation of their entire academic background.

Because educational systems vary widely around the world, there is no single, uniform admission requirement for international students; however, they must meet the following minimum requirements for admission purposes:

1. Completion of the academic coursework and national examinations necessary to satisfy admission requirements to colleges and universities in their native country.
2. Adequate financial support, verified by the Confidential Financial Statement form and a current bank letter or scholarship award.
3. If English is not their first language, competency in English must be demonstrated through a score of 525 or higher on the Test of English as a Foreign Language (TOEFL), or a score of 195 on the computer-based TOEFL, or transferable English composition courses which would meet the general education writing requirement (3.0 GPA in each course).

Students may also satisfy the language competency requirement through recommendation from the UESL program at CWU. Competency in English is required before an I-20 is issued.

- International students transferring from U.S. institutions must have a minimum grade point average of 2.50 in transferable courses and meet the academic requirements for college entrance in their native country.

Applicants must submit Central Washington University's International Student Application for Admission, preferably on-line at (www.cwu.edu/~cwuadmis/international.html) or paper copy, and the \$35 application fee. In addition, students must send official transcripts from all secondary schools and colleges attended directly to the Office of Admissions. Examination results, such as General Certificate of Education, Ordinary and Advanced Level scores, West African School Certificate, Hong Kong Certificate of Education or Advanced Level Certificate, etc., should be sent directly from the Testing Center in charge of administering the examinations. Personal student papers, photocopies, or attested copies are not accepted for admission or evaluation purposes. All documents should be sent well in advance (90 days) of the quarter for which the applicant seeks admission.

Readmission of Former Students

Students who interrupt their studies for one or more quarters at CWU (excluding summer) must reapply for admission to the University and pay the \$35 application fee. If the student has attended any institution during their absence from CWU, the student must send official transcripts of all post-CWU coursework to the Office of Admissions at the time they reapply. Eligibility for re-admission will be based on prior academic performance at CWU and any course work completed since last attending CWU. If a student left on academic or disciplinary suspension, they should contact the Office of Student Affairs and Enrollment Management for reapplication instructions thirty (30) days prior to the start of the quarter for which the student is applying.

Confirmation of Admission

Students who are offered admission to the University must confirm their intention to enroll by paying a non-refundable \$55 confirmation fee before they can begin the orientation, registration, and advising process. The University will not withdraw an offer of admission until after May 1. After that time, students who have not confirmed may be denied admission if enrollment limits have been reached. Students who choose not to

accept offers of admission must notify the Office of Admission in writing. An offer of admission is only valid for the academic quarter indicated in the acceptance letter. A student who chooses not to accept an offer of admission may reapply for a subsequent quarter.

Withdrawal of Offer of Admission

Offers of admission may be withdrawn by the Office of Admissions if a student's academic work between the time of application and the quarter for which the student has applied results in the student not meeting the minimum requirements for automatic admission or other requirements. If an offer of admission is withdrawn, then the Office of Admissions will refund the confirmation fee.

Applicants for Nonmatriculated Status

Students who are not seeking degrees or certificates may be allowed to enroll in courses as nonmatriculated students. These students do not need to go through the regular admissions process but should apply through the Office of the Registrar and may be allowed to register on a space-available basis. Credits earned as a nonmatriculated student may not be used to satisfy degree or certificate requirements unless the student applies and is accepted as a matriculated student*, in which case a maximum of 45 credits may be applied.

Students who have previously attended Central Washington University as matriculated students and have not obtained a degree and students who have applied and been rejected for undergraduate matriculated status will not be allowed to enroll as nonmatriculated students. Nonmatriculated students are not eligible for most financial aid, veteran's benefits, credit evaluations, or other services regularly provided for matriculated students.

*Exception may be made for non-matriculants in collaborative certificate programs.

High School Enrichment Program

Students who have not yet graduated from high school may be allowed to enroll as nonmatriculated students for courses that they need to advance academically, provided that such academic opportunities are not readily available to them elsewhere. To be eligible for the High School Enrichment Program, students must have demonstrated superior academic performance or preparation in the area of study for which they are applying. High School Enrichment applicants must explain in writing their reasons for wanting to attend specific courses at the University and offer arguments for their potentials to succeed. They must also meet with the Registrar and have the approval of their high school principal and the course professor.

Campus Visit

Prospective students, their relatives, and friends may visit the University through the Central Visitation Program. We offer daily campus visits Monday through Friday, and some Saturdays. CWU also offers the Central Sampler, an overnight visitation program. There is a nominal charge to participate in this program, which enables visitors to spend a night in a residence hall, eat three meals in the cafeteria, tour campus, and hear presentations by Admissions, Housing, Dining Services, and Financial Aid. Sampler staff also arrange for individual meetings with faculty in areas of academic interest. Sampler visits are available on selected dates throughout the academic year. For most current visitation information and dates, please visit www.cwu.edu/~cwuadmis/visit.html or call 1-866-CWU-4-YOU (1-866-298-4968).



TRANSFER CREDIT

Transfer Credit

In general, it is the University's policy to accept credits earned at institutions fully accredited by their respective regional accrediting association. A student may transfer no more than 135 credits, including a maximum of 90 credits from community colleges. Credits are evaluated toward meeting degree requirements by the Office

of the Registrar based upon official transcripts.

Transfer courses equivalent to CWU courses will apply toward the baccalaureate degree. Other transfer courses that are not exact equivalents may also be accepted and allowed as general electives in the degree program with approval.

Credits earned at institutions which are not fully accredited by a regional accrediting

association are not accepted. Consideration for exception to this policy may be made by written petition to the Dean of the appropriate college after demonstrating success at the University by earning a minimum of 45 credits with a cumulative GPA of at least 2.5.

The University endorses the Policy on Inter-College Transfer and Articulation Among Washington Public Colleges and Universities published by the Higher Education Coordinating Board. The policy deals with the rights and responsibilities of transfer students and the review and appeal process in transfer credit disputes. For more detailed information, contact Registrar Services.

The University will accept a maximum of 90 community college credits. Additional coursework which exceeds that amount may be used to meet specific degree requirements, but additional credits will not be allowed. Credits earned in courses numbered 100 and above are generally accepted provided the courses require university-level study. Credits earned in lower division courses (normally numbered 100/200) will not be allowed toward meeting upper-division credit requirements.

Academic Associate degrees which are part of direct transfer agreements between the University and Washington community colleges will meet the general education requirement of a bachelor's degree. Community colleges offer several kinds of Associate degrees, therefore, students who plan to transfer to the University should check with their counselors to make sure they are enrolled in the appropriate degree program. Students who earned the AA degree prior to the date of direct transfer agreement between the University and individual community colleges may petition the Provost or his designee for acceptance of their degree to meet general education requirements.

Associate of Science degrees with transfer agreements between the University and Washington Community Colleges will meet the general education requirements of a bachelor's degree when students complete additional courses at the University. Transfer students without a transferable associate degree from a Washington state community college wishing to complete such a degree must complete it by the time they have completed 45 credits or one calendar year, whichever comes later, after initial enrollment at Central in order for the AA degree to satisfy the general education requirements at Central Washington University.

Academic transfer associate of arts degrees from a college or university outside Washington state accredited by the Northwest Association of Schools and Colleges will meet the general education requirements of a bachelor's degree.

Advanced Placement Credit

Students may receive credit or advanced placement, or both, depending upon the scores achieved in the College Entrance Examination Board Advanced Placement Test (AP). Students must request that their AP test scores be sent to the Registrar's Office at Central. Scores of 3 or better on Advanced Placement Examination will be awarded as free electives for departments without specific policy.

Department	AP Score	CWU Credit
Art	3, 4, 5	Department Electives.
Biology	3	Credit for BIOL 101.
Chemistry	4, 5	Credit for any two of BIOL 101, 110, 111, 112.
	3	Exempt from CHEM 181, 181LAB; credit awarded upon successful completion of CHEM 182.
	4	Exempt from CHEM 181, 181LAB, 182, 182LAB credit for both courses awarded upon successful completion of CHEM 183 and CHEM 183LAB.
	5	Credit for CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB.
Computer Science A	3, 4,	Credit for CS 110.
Computer Science A	5	Credit for CS 110, 111.
Computer Science AB	3, 4	Credit for CS 110, 111.
Computer Science AB	5	Credit for CS 110, 111, 301
Economics		
Micro Economics	3	Credit for ECON 201.
Macro Economics	3	Credit for ECON 202.
English		
Lang and Comp	3, 4, 5	Credit for ENG 101.
Lit and Comp	3, 4, 5	Credit for ENG 105.
Foreign	3	Credit for 251.
Languages (all)	4	Credit for 251, 252.
Maximum 15 total cr.	5	Credit for 251, 252, 253.
U.S. History	3	Credit for either HIST 143 or 144.
	4	Credit for either HIST 143 or HIST 144, with exemption for majors in the other. (Majors will be required to take an additional 5 credits of upper-division U.S. History.)
	5	Credit for HIST 143 and HIST 144.
European History	3	Credit for either HIST 102 or 103.
	4, 5	Credit for either HIST 102 or HIST 103 with exemption for majors in the other. (Majors will be required to take 5 additional credits in upper division non-Western history.)
Mathematics AB	3, 4, 5	Credit for Math 172
Mathematics BC	3, 4, 5	Credit for Math 172 and 173
Math Statistics	3, 4 or 5	Credit for Math 311
Music	3, 4, 5	Department Electives.
Physics B	4, 5	Exemption from PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB.
Physics C		
Mechanics	4, 5	Exemption from PHYS 181, 181LAB, 3 Dept. Electives.
Electricity and Magnetism	4, 5	Exemption from PHYS 182, 182LAB.
Political Science		
American Govt	5	Waive POSC 210, 3 Department Electives.
Comparative Politics	5	Waive POSC 260, 3 Department Electives.
Psychology	4	Credit for PSY 101, 3 Department Electives

Other Forms of Credit

The University recognizes college credit from a number of sources, including Advanced Placement (AP), College Level Examination Program (CLEP), International Baccalaureate (IB), Military Service and Correspondence. Up to 45 quarter credits can be earned from these programs.

College Level Examination Program (CLEP)

Students will be awarded five college-level quarter credits for each score at the 50th percentile on the CLEP Humanities, Social Science/History, and Natural Sciences examinations. These credits will meet the General Education requirements in the appropriate areas. Students may also be awarded credit for Subject examinations as determined by appropriate academic departments at the time of application for credit.

No more than 45 total quarter credits through CLEP or other sources of non-traditional credit may apply to graduation. Other sources of non-traditional credit include Advanced Placement (AP), International Baccalaureate (IB), military education experience or correspondence credit. CLEP credit is not awarded for English.

International Baccalaureate (IB)

Central Washington University recognizes the International Baccalaureate Program as a coherent, challenging course of study and responds individually to each participant's international baccalaureate transcript for award of college credit. Students may be awarded credit for completing individual areas of study within the program. IB students should submit transcripts to the Office of the Registrar who will review their program of study and examination scores with the appropriate department chair.

Non-U.S. College/University Credit

Credit will be accepted from non-U.S. institutions of higher education when (1) it has been earned at an institution linked to CWU either by a bilateral or consorial (e.g., ISEP) agreement, or when an institution has been certified by the CWU Office of International Studies and Programs as a legitimate, recognized institution of higher education (tertiary level) within a particular country, and (2) the student has received a passing grade recognized by the institution, and (3) an official record or transcript has been received by the University.

Credit for Military Service

Upon submission of the DD214 or DD295, matriculated students may receive up to 30 lower division elective credits for completion of military schools as recommended by the American Council on Education.

Degrees Offered

Central Washington University offers the following undergraduate degrees.

Bachelor of Arts
Bachelor of Arts in Education
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science

Students wishing to earn a B.A., B.F.A., B.MUS., or B.S. degree must complete (1) the general education program; (2) a concentration of at least 60 credits which may be satisfied by a specified major, or a specified major and minor, or a specified major and courses in other fields as prescribed by the major department; (3) electives in sufficient quantity to bring the total quarter credits to 180; and (4) other degree requirements as specified. Major fields of study are listed below. Minor concentrations are offered in many fields.

Students wishing to earn a B.A.Ed. degree must complete (1) the general education program; (2) a major in Early Childhood Education, Elementary Education or Special Education and minors, when appropriate; (3) the professional education foundation courses; (4) 180 total quarter credits; and (5) other general degree requirements as listed under the College of Education and Professional Studies section in this catalog. Please note that a major in Early Childhood Education requires a minor in Elementary Education. Other majors may select any university minor; however, students are strongly encouraged to select an endorsable teaching minor.

College Level Examination Program

CLEP Test Scores for Central Washington University at the 50th Percentile or Above.

	Percentile	Score	CWU Area of Credits Awarded
Humanities	50th	50	Literature & the Humanities
Natural Sciences	50th	50	Fundamental Disciplines of Physical & Biological Sciences
Social Science & History	50th	50	Perspectives on the Cultures & Experiences of the US
Chemistry	B grade	63	Chemistry 181, 181LAB
History US I	50th	57	History 143
History US II	50th	54	History 144
Western Civilization I	50th	50	History 101
Western Civilization II	50th	50	History 102 or 103
Calculus w/Elem.Funct.	50th	50	Math 172 & Math 173
Intro to Psychology	50th	50	Psychology 101
Human Growth & Devel	50th	50	Psychology 314
Intro Ed. Psychology	50th	50	Psychology 315
Intro to Sociology	50th	50	Sociology 107
Info Systems & Computer Applications	50th	50	Computer Science 101
Foreign Languages		Level I	Level II
Spanish Language	50	151, 152 & 153	66 Spanish 251, 252 & 253
French Language	50	151, 152 & 153	62 French 251, 252 & 253
German Language	50	151, 152 & 153	63 German 251, 252, & 253

26 UNDERGRADUATE PROGRAMS and COURSES

Major Field of Study	Degree Designation	Administrative Unit or Department		Degree Designation	
Accounting	B.S.	Accounting	English: Teaching	B.A.	English
Anthropology	B.A., B.S.	Anthropology and Museum Studies	Environmental Geological Sciences	B.S.	Geological Sciences
- Museum Studies			Exercise Science	B.S.	Health, Human Performance, and Recreation
Anthropology: Teaching	B.A.	Anthropology and Museum Studies	Family & Consumer Studies	B.A.	Family & Consumer Sciences
Art	B.F.A.	Art	- Family Studies		
- Graphic Design			- Personalized Studies		
- Studio Art			Family & Consumer Sciences	B.A.	Family & Consumer Sciences
Art	B.A.	Art	Family & Consumer Sciences	B.S.	Family & Consumer Sciences
Asia/Pacific Studies	B.A.	Interdisciplinary	Vocational Teaching		
Biology	B.A., B.S.	Biological Sciences	Fashion Merchandising	B.S.	Interdisciplinary
- Cell & Molecular Biology			Flight Technology	B.S.	Flight Technology
- Ecology			Pilot Specialization		
- General Biology			- Flight Officer Emphasis		
- Organismal Biology			- Commercial Pilot Emphasis		
Biology: Teaching	B.S.	Biological Sciences	- Aviation Management Specialization		
Business Administration	B.S.	Business Administration	- Airway Science Specialization		
- Finance			- Aircraft Systems Management Emphasis		
- General Business			- Aviation Maintenance Management Emphasis		
- Human Resource Management			Food Science & Nutrition	B.S.	Family & Consumer Sciences
- Management & Organization			- Nutrition & Dietetics		
- Management Information Systems			- Nutrition Science		
- Marketing Management			- Food Service Management		
- Operations & Supply Chain Management			Foreign Language	B.A.	Foreign Languages
Business Education	B.S.	Information Technology & Administrative Management	- Chinese, French, German, Japanese, Russian, Spanish		
Chemistry	B.A.	Chemistry	Foreign Language Broad Area	B.A.	Foreign Languages
- Biochemistry	B.S.		- Chinese, French, German, Japanese, Russian, Spanish		
Chemistry: Teaching	B.A.	Chemistry	Foreign Language: Teaching	B.A.	Foreign Languages
Communication Studies	B.A.	Communication	- Chinese, French, German, Japanese, Russian, Spanish		
Community Health	B.S.	Health, Human Performance, and Recreation	Foreign Language: Teaching Broad Area	B.A.	Foreign Languages
- Community Health Education			- Chinese, French, German, Japanese, Russian, Spanish		
Computer Science	B.S.	Computer Science	General Studies		General Studies
- Artificial Intelligence			- Humanities	B.A.	
- Computer Systems			- Social Sciences	B.S.	
- Information Systems			- Natural Sciences	B.S.	
- Scientific Computing			Geography	B.A.	Geography & Land Studies
- Software Design and Applications			Geography: Teaching	B.A.	Geography & Land Studies
Construction Management	B.S.	Industrial & Engineering Technology	Geology	B.A., B.S.	Geological Sciences
Early Childhood Education	B.A.Ed.	Teacher Education Programs	Gerontology	B.S.	Psychology
Earth Science	B.A.	Geological Sciences	History	B.A.	History
Economics	B.S.	Economics	History: Teaching Broad Area	B.A.	History
- Managerial Economics			Individual Studies	B.A., B.S., B.MUS.	Associate Vice President for Undergraduate Studies
- General Economics			Industrial Education	B.S.	Industrial & Engineering Technology
Electronic Engineering Technology	B.S.	Industrial and Engineering Technology			
- Computing Engineering Technology					
- Electronic Systems					
Elementary Education	B.A.Ed.	Teacher Education Programs			
English	B.A.	English			

Industrial Education Broad Area Teaching	B.S.	Industrial & Engineering Technology	Primate Behavior and Ecology	B.S.	Interdisciplinary
Industrial Technology	B.S.	Industrial & Engineering Technology	Psychology	B.A.	Psychology
Information Technology and Administrative Management - Administrative Management - Database Administration - Information Technology - Network Administration - Retail Management and Technology - Web Administration	B.S.	Information Technology & Administrative Management	Public Policy	B.S.	Interdisciplinary
Journalism -Print Journalism -Broadcast Journalism -Online Media	B.A.	Communication	Public Relations	*B.A.	Communication
Language Arts	B.A.	English	Recreation and Tourism - Recreation Management - Tourism Management	B.S.	Health, Human Performance, and Recreation
Law and Justice - Law Enforcement - Prelaw/Paralegal - Corrections - Generalist	B.A.	Law & Justice	Safety and Health Management -Construction Safety -Risk Management -Safety and Health Management	B.S.	Industrial and Engineering Technology
Marketing Education	B.S.	ITAM	School Health Education	B.A.	Health, Human Performance, and Recreation
Mathematics - Actuarial Science	B.A. B.S.	Mathematics	Social Science	B.A.	Interdisciplinary
Mathematics: Teaching Secondary	B.A.	Mathematics	Social Science: Teaching Secondary	B.A.	Interdisciplinary
Mechanical Engineering Technology - Manufacturing Technology - Mechanical Technology	B.S.	Industrial & Engineering Technology	Social Services	B.S.	Sociology
Music	B.A.	Music	Sociology	B.A., B.S.	Sociology
Music - Keyboard or Guitar Performance - Theory-Composition - Percussion Performance - String Performance - Vocal Performance - Wind Performance	B.MUS.	Music	Special Education (P-12)	B.A.Ed.	Teacher Education Programs
Music: Business	B.A.	Music	Special Education (P-3)	B.A.Ed.	Teacher Education Programs
Music Education - Broad Area - Choral Music - Instrumental Music	B.MUS.	Music	Special Education (Broad Area)	B.A.Ed.	Teacher Education Programs
Paramedic	B.S.	Health, Human Performance, and Recreation	Theatre Arts - General Studies - Performance - Design and Technology - Youth Drama - Theatre Management	B.A.	Theatre Arts
Philosophy - Religious Studies	B.A.	Philosophy	Theatre Arts: Secondary Education	B.A.	Theatre Arts
Physical Education	B.S.	Health, Human Performance, and Recreation	Visual Art: Teaching	B.A.	Art
Physical Education: Teaching K-12	B.S.	Health, Human Performance, and Recreation			
Physics - Engineering	B.A. B.S.	Physics			
Political Science	B.A.	Political Science			

Certificate Programs Offered

The following certificates are offered:

Initial Principal's	Professional Teaching
Residency Teaching	Program Administrator
Continuing Principal's	Reading Resource Specialist
Continuing Teaching	School Counselor
Administrative Management	School Psychologist
Business Education	Supply Chain Management
Diversified Occupations	Trade and Industrial
Industrial Safety and Health	Traffic Safety Education
Library Media-All Levels	Vocational Family and
Marketing Education	Consumer Science Education
Personal Computer Applications	

General tuition and fee rates are established by the state legislature and miscellaneous fees are set by the CWU Board of Trustees. Tuition for 2004-2005 was not set at press time, therefore, the following rates are the proposed 2004-2005 rates. Refer to the on-line version of the catalog for updates. All fees are subject to change without notice.

Undergraduate and post-baccalaureate students registering for 10-18 credits:

Quarterly Tuition Fees for Residents of the State of Washington \$1,303.

Quarterly Tuition Fees for Nonresidents of the State of Washington \$3,819.

Undergraduate and post-baccalaureate students registering for nine credits or less:

Resident - for each credit \$130.30.
Minimum of \$260.60.

Nonresident - for each credit \$381.90.
Minimum of \$763.80.

Graduate (Master's Degree) students registering for 10-18 credits:

Resident Graduate - \$1,840.

Nonresident Graduate - \$3,967.

Graduate (Master's Degree) students registering for nine credits or less:

Resident Graduate - for each credit \$184.
Minimum of \$368.

Nonresident Graduate - for each credit \$396.70.
Minimum of \$793.40.

Students registering for more than 18 credits:

Undergraduate and post-baccalaureate,
Resident - for each credit \$115.60.

Nonresident - for each credit \$367.
Resident Graduate - for each credit \$170.
Nonresident Graduate - for each credit \$382.

Continuing Education Tuition and Fees

All courses taught through the Office of Continuing Education are self-supporting. The waiver for Southeast Asia veterans, university staff and senior citizens does not apply. Full fee-paying students must make additional payments at the rate established for each continuing education course in which they enroll.

Resident and Nonresident Status

Washington state law concerning resident classification for tuition and fee purposes, RCW 28B.15.012 et seq., requires that a student "(a)(i) have established a bona fide domicile in the state of Washington, primarily for purposes other than educational, for at least one year immediately prior to the beginning of the quarter for which he or she registers at the University, and (ii) be financially independent, or (b) be a dependent student, one or both of whose parents or legal guardians have maintained a bona fide domicile in the state of Washington for at least one year prior to the beginning of the quarter for which the student registers at the University." The term "domicile" denotes a person's true, fixed, and permanent home and place of habitation. It is the place where he or she intends to remain, and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.

Any change of residency status for a given quarter must be based on written evidence provided by the student on a residency classification questionnaire on or before the first class day of the quarter for which a change of residency is sought. Questionnaires are available through the Office of Admissions. The burden of proof in all cases rests with the student.

In accordance with RCW 28B.15.014, certain nonresidents are exempted from paying nonresident tuition and fees. To be eligible for such an exemption, a nonresident student must provide documented evidence that he or she resides in the state of Washington, and (a) holds a graduate service appointment, designated as such by the University, involving not less than 20 hours per week; (b) is employed for an academic department in support of the instructional or research programs involving not less than 20 hours per week; or (c) is a faculty member, classified staff member, administratively exempt employee holding not less than a

half-time appointment, or dependent child of such a person.

Out-of-state applicants. To qualify as a Washington state resident, a student must be a U.S. citizen or have permanent resident (resident alien) status. A student must also be either independent and have established a permanent home in the state of Washington for purposes other than education at least 12 months prior to enrollment. Verification will be requested.

The spouse or dependent of a person who is on active military duty, stationed in Washington, can be classified as a resident by submitting proof of military assignment. A student cannot qualify as a Washington resident if s/he (or parent, in the case of a dependent) has attended college as a resident of another state within a year prior to enrollment; has received financial assistance from another state, including reciprocity awards, within a year prior to enrollment; or possesses a current out-of-state driver's license, vehicle registration or other document which gives evidence of being domiciled in another state. For further information, contact the Office of Admissions at (509) 963-3001.

All residency questions should be directed to the Office of Admissions. Residency requirements are subject to legislative change.

Senior Citizens

Senior citizens are encouraged to take advantage of the large variety of courses offered at the University. Persons 60 years of age or older may register as an auditor the first day of class on a space-available basis with permission of instructor. The fee is \$5 for a maximum of two courses, not to exceed six credits. Any person utilizing this provision taking more than six credits must pay an additional \$25 tuition charge. Credits may not be applied toward meeting requirements for any degree or for increments on any wage or salary scale.

Southeast Asian Veterans

Chapter 306- Laws of the State of Washington, 1989, RCW 28B.15.620 may provide a special exemption from the 1977 increase in tuition and fees for persons who (a) have served in the Southeast Asia theater of operation, (b) between a period commencing August 5, 1964, and ending May 7, 1975, and (c) who qualify as a resident student under R.C.W.28B.15.012. For further information, contact the Veteran Affairs Office.

Employee Tuition Waiver

The University offers educational benefits for CWU personnel, members of Washington State National Guard, and state employees. Eligible employees must hold appointment to a half-time or more position and have attained permanent status. For purposes of this section, half-time staff shall include all permanent employees who are employed on a 20 hour-per-week basis, including employees scheduled for 20 hours per week for more than six months per year on an instructional-year basis. Contracted faculty and exempt employees who are employed half-time or more for a period of at least six months are eligible for these educational benefits.

Faculty who are hired on a quarter-to-quarter basis become eligible beginning with the second consecutive quarter of half-time or more employment. For the purposes of this section, employment of faculty in spring quarter and the following fall quarter may constitute consecutive employment.

Employees who are not eligible for the tuition and fee waiver are: faculty on courtesy appointments; retired faculty, staff, and exempt personnel; and undergraduate and graduate assistants, associates, or others holding positions with student status. An employee who has met university admission requirements and filed proof of eligibility with the Office of the Registrar no less than 15 working days prior to the beginning of each academic term may take up to eight credit hours of coursework for a nominal fee each quarter (summer excluded). Enrollment is subject to space availability only. Enrollment in a closed or wait-listed course under this waiver is prohibited. Consult the educational benefits policy for CWU staff, state employees, and National Guard members for specifics.

Tuition Refund Schedule

A continuing student will receive 100 percent refund of tuition and fees if a complete withdrawal from the University occurs prior to the sixth day of the quarter.

A student will receive 50 percent refund of tuition and fees if a complete withdrawal from the University occurs on or after the sixth day of the quarter and within 30 calendar days of the beginning of the quarter.

There is no refund of tuition and fees if withdrawal from the University occurs after the 30th calendar day of the quarter.

There is no refund for individual class withdrawals after the change of schedule period.

Tuition and fees may be refunded to students unable to complete coursework as a result of being called to active duty in the Armed Forces of the United States.

Miscellaneous Fee Schedule

Fees are subject to change for the 2003-2004 academic year.

Application For Admission Fee. \$35.

Background Check Fee. In order to participate in certain programs/majors a student must arrange for and obtain a criminal background check from the appropriate law enforcement agency. Information regarding the process, requirements, and costs can be obtained through the department offering the program/major.

Confirmation of Acceptance of Admission Fee. \$55.

Athletic Fee. \$35 mandatory fee per quarter for all students. Students with less than 10 credits will be assessed \$3.50 per credit.

Health and Counseling Fee. \$60 per quarter for all campus-based students enrolled for six or more credit hours. \$35 for five or more credit hours during summer session.

Technology Fee. \$25 mandatory fee for all students. Students with less than 10 credits will be assessed \$2.50 per credit.

Audit Fee (without credit). A student enrolling in a course as an auditor is charged regular fees.

Breakage Fee. Students enrolled in certain courses are required to pay for any equipment they break. Fees are variable according to the item broken.

Credit by Examination Fee. Students applying to challenge a course will be assessed a nonrefundable fee of \$15 per credit, with a minimum of \$30 per course challenge.

Graduation Fees. The fee for a non-teaching baccalaureate degree is \$25. The fee for a teaching baccalaureate degree is \$52. An additional \$10 will be assessed for concurrent degrees. The fee for degree reapplication is \$15. (Note: Traditional commencement regalia is available through the University Bookstore. Arrangements should be made by May 1.)

Transcript Fee. \$5 for each copy. \$15 for on demand, express mail or FAX copies. All fees are due in advance.

Health and Accident Insurance. Group insurance is optional. An additional premium will allow student dependents to be covered by medical facilities other than the student health center, which is reserved for student use only. For further information, inquire at the Cashier's Office.

Safe Ride Fee. \$3 per quarter. No fee for Summer Session.

Student-in-Training (Liability) Insurance. In order to register for certain courses, a student must arrange for individual student-in-training (liability) insurance purchased either through the CWU business office or through some other

agency. Information regarding types of coverage available may be obtained from the Department Chair or Program Director.

International Studies Application Fee. A fee not to exceed \$150 per student per quarter for students participating in study abroad or exchange programs.

Master's Thesis Binding Fee. Students submitting a thesis as part of the requirements for the Master's degree pay a fee of \$60 for binding of three copies of their thesis. Two copies are deposited in the library and one copy is given to the student. Students not wishing a copy for themselves will be assessed \$40. Any students wanting more than one copy for themselves must make their own binding arrangements for the extra copies.

Parking. Students using the university's parking facilities must purchase a campus parking permit.

Supply and Equipment Fees. Students enrolling in certain courses are charged for supplies and equipment not furnished as part of the course.

Late Fee. Students failing to pay their tuition in full by the published deadline are assessed a \$50 late fee.

Late Registration Fee. Students will be charged a \$25 per course for registration from the sixth through the tenth day of instruction; a \$50 fee per course for the eleventh day through the thirtieth day of instruction; and \$75 per course after the thirtieth day. Permission to add courses will still require signature of the instructor and dean after the tenth day of classes.

Reinstatement Fee. Students who are cancelled on the 30th day of the quarter for tuition non-payment will be assessed a \$75 reinstatement fee if reinstatement is granted.

Registration Confirmation Fee. \$50. This fee is required of all students without full financial aid who wish to preregister. The fee will be applied toward the students tuition. Students failing to attend will forfeit \$50.

Financial Obligation

Admission to or registration with the University, conferring of degrees and issuance of academic transcripts may be withheld for failure to meet financial obligations to the University. Payment received from students will be applied in the following priority: 1) oldest charge; 2) tuition and course fees; 3) housing and dining charges; 4) other charges.

Registration, by telephone or in-person, obligates students for payment of all tuition and fees. If tuition is not paid by the due date, students will be assessed a \$50 late fee and be liable for any other reasonable collection costs and charges.

Academic Advising

All students are expected to seek, and the University is expected to provide, appropriate advising resources. These resources may include (but are not limited to) specific faculty advisors, special program advisors, career development counselors, advising seminars, advising workshops, and advising publications. General Education advising is available at the Academic Advising Center located in Bouillon Hall 206.

Faculty advisors are responsible for providing general education, as well as major program advising. Students are also encouraged to seek advice from various faculty concerning specific areas of interest or from faculty who serve as general advisors. Advisors are listed in the quarterly class schedule also. The Advising Center also provides specialized advising for non-traditional students. The non-traditional designation can be because of age (25 or older) or self identified based on family or other circumstances. If you believe yourself to be non-traditional, you are encouraged to contact the advisor in the Advising Center who is specialized in non-traditional student issues.

The Advising Center provides specialized advising for ethnic minority students. The multi-cultural advisor can assist with time management and study skill development; arrange for free tutoring and peer advising; and recommend academic, employment, and professional opportunities.

Continuing freshmen are required to meet with their UNIV 101 instructor or departmental advisor during advising week. Advising week takes place the week prior to early registration. During this meeting the student and advisor will discuss the appropriateness of the student's schedule in obtaining their career and academic goals. It is strongly suggested that all other continuing students also meet with their advisors during advising week.

Admission to Major

As a student progresses, identification with a major program of studies becomes necessary for effective advising. Students are required to apply for admission to the program in which they want to major. Application forms are available in department offices. After completing the form, students should submit it to the department office which administers the major. A major or pre-major advisor will be assigned by the major department at the time a student is admitted into a major or pre-major program.

Students who have earned 100 or more credits and who have not applied and been admitted to a major or pre-major will not be permitted to register for classes until they

submit a completed report of pre-major advising to the Office of the Registrar indicating that they have discussed a major with a faculty advisor. Otherwise, students who have not been admitted to a major or pre-major prior to 100 credits will be given last priority during preregistration.

If a student does not enroll for two or more consecutive quarters at Central Washington University (excluding summer), he or she will be required to reactivate his or her major status. Reactivation must be done with the concurrence of the department and in accordance with department and the Online Electronic Catalog (OEC) requirements current at the time of readmission. Students are bound by the major requirements which became effective with the Fall OEC for the academic year in which they are accepted into their major.

Registration

Currently enrolled students preregister for courses by using the university telephone registration system. Web registration will be available in May 2004 for Fall of 2004.

Registration for new and readmitted students, and continuing students who did not preregister, begins the first day of each academic quarter. Students may change their schedule during the designated change of schedule period. Students are encouraged to use REGI telephone registration system or Safari, web registration for Fall 2004 or after to complete all registration transactions.

Registration, in-person, by telephone, or web registration, obligates students for payment of all tuition and fees. If tuition is not paid by the due date, students will be liable for a late fee and for any other reasonable collection costs and charges.

Consult the quarterly schedule of classes to determine exact dates for preregistration, registration, tuition deadlines, and the change of schedule period.

Academic Credit

The rule for determining academic credit is: one credit represents a total time commitment of three hours each week of the quarter. A regular load of 15 credits requires 45 hours of work per week. The total time includes that spent in class, studying, conference with instructor, writing, laboratory, exercises or any other activity required of students. A minimum of 180 credits is required for a degree.

Colleges which operate on a semester basis (i.e., divide the academic year into two parts, exclusive of summer) give semester credits. Quarter credits multiplied by two-thirds equal semester credits. Semester credits multiplied by one-and-one-half equal quarter credits.

Course Numbering and Class Standing

Courses are numbered sequentially from 100 through 700. Those numbered 100 are pre-collegiate and credits earned in such courses are not accepted toward meeting degree requirements. Undergraduate courses are numbered 101 through 499 and graduate courses are numbered 501 and above. Courses numbered 500 are professional development courses and are not accepted toward meeting degree requirements.

Lower Division

Freshman 101 through 199
Sophomore 200 through 299

Upper Division

Junior 300 through 399
Senior 400 through 499

Students may enroll in courses one year ahead of their present status except when otherwise specified in the course description.

A student's class standing is determined by the number of credits earned and/or accepted upon transfer. The following table lists the credits required for each class:

Freshman 0-44.9
Sophomore 45-89.9
Junior 90-134.9
Senior 135 or more

Students holding bachelor's degrees are considered graduate students whether or not they are admitted to a graduate degree program. Satisfying graduation requirements depends not only on the number of credits completed (a minimum of 180) but also on completion of all other degree requirements.

Student Study Load

Full-time and part-time students are determined by the number of credits for which they register. Full-time undergraduate is 12 credits or more. Three-quarter time undergraduate is 9-11 credits. One-half time undergraduate is 6-8 credits. Full-time graduate is 10 or more credits. One-half time graduate is 5-6 credits.

Undergraduate:

- 15 credits - Standard undergraduate load
- 18 credits or fewer - No permission required
- 19-20 credits - Major Advisor and Major Department Chair approval required, or Advising Center for undeclared majors.
- Over 21 credits - Major Advisor and Major Department Chair approval as well as the appropriate College Dean.
- A 2.8 or higher cumulative GPA is

recommended for students seeking an overload.

Graduate:

15 credits - Normal Graduate load

16 credits or less - No permission required

17-19 credits - Major Department Chair or Dean approval required

20 or more credits -Graduate Dean's approval required

Proficiency Requirements

Students will be assessed for placement into ENG 101 and MATH 101 and above upon entering CWU as freshmen. Students with deficiencies in English usage/reading or mathematical computation must correct them prior to enrolling in ENG 101 or MATH 101 and above, respectively.

Seniors in Graduate Courses

Seniors may enroll in graduate level courses (501 and above) with the approval of both the instructor of the course and the Department Chair. Credit earned in these courses may meet undergraduate or graduate program requirements, but not both. Students wishing to designate the course for graduate credit must obtain approval from the Dean of Graduate Studies and Research.

Auditing a Course

Students eligible to enroll in a course for credit may enroll as an auditor provided space is available and permission is secured from the instructor prior to registration. To receive credit for an audited class, students must enroll for credit in and repeat the same course in a subsequent quarter. Students are assessed full tuition for audited courses. Instructors may not compel auditors to write papers or take examinations, but may insist upon other course requirements. Instructors may request of the college dean that auditors be officially withdrawn from the course if these requirements are not met.

Students receive neither credit nor grades for audited courses.

Course participation requirements are set by the faculty member responsible for the course.

Concurrent Enrollment

Credit for work taken while simultaneously enrolled at CWU and other educational institutions may be transferred to Central. Any student who has obtained an F-1 visa from CWU must obtain permission from the Director of International Programs or designee prior to enrolling in any other institution.

The University Catalog

Choices and Limitations

The official Online Electronic Catalog (OEC) is the University's compilation for all curriculum. Undergraduate catalogs are valid for five years. A student should expect to complete General Education requirements as listed in the Online Electronic Catalog current at the time of first enrollment at either Central Washington University or a community college in the state of Washington (provided he or she transfers directly to CWU from the community college and has not attended another four year institution). The student should also expect to meet the specific requirements of the departments for majors and minors in the OEC current at the time he or she is accepted by the department into the major or minor program.

Graduate students admitted to the Master's degree program may use the catalog they are admitted under or the current one.

Leave of Absence

Students who do not enroll for consecutive academic quarters (exclusive of summer) must reapply for admission. However, if students meet the criteria below, they may be granted a leave of absence, which means that they do not have to reapply for the following quarter and that they may register early for classes as continuing students at the designated time.

1. The Application for Leave of Absence must be submitted to the Registrar's Office on or before the last day of the quarter (including summer) prior to the quarter for which the student is seeking leave.
2. Leaves will be approved only if attending consecutive quarters would present an exceptional hardship or loss of opportunity.
3. Students seeking leave for more than one quarter must apply each quarter for the following quarter.

Withdrawal From a Course

Peremptory (uncontested) withdrawals will not be permitted after the first six weeks of instruction. Students who withdraw after the add-drop period from 25 percent or more of the coursework for which they have registered for two or more quarters each academic year are subject to dismissal. Students who have been dismissed under this policy may not enroll for courses without submitting an approved plan of study signed by an academic advisor to the office of the Provost. To continue enrollment, the student must satisfactorily complete all credits enrolled during the first quarter of readmission. Students who do not meet this requirement will not be allowed to register for one calendar year.

Peremptory withdrawals will be noted on the student's transcript with "+W". Class rosters will reflect the +W for students who have used their peremptory withdrawal.

Withdrawals after the sixth week of instruction will be granted only for reasons of hardship and then only upon written petition to and written approval by the Registrar. The student must contact the course instructor and obtain the faculty member's signature on the hardship withdrawal petition. The signature serves merely to acknowledge the petition and implies neither support nor rejection of the request. The Registrar may consult with affected faculty when evaluating a petition and will notify the instructor if the hardship withdrawal has been approved. Hardship withdrawals will be noted on the student's transcript with an "HW" (hardship withdrawal). Hardship withdrawals from individual courses will not be permitted during or after the final examination period.

Conversions of incompletes to withdrawals must be petitioned as if they were hardship withdrawals, i.e., they may be effected only upon petition to the Registrar. Withdrawals will not be included in calculating grade point averages.

There are no tuition refunds in cases of withdrawal from individual courses.

Withdrawal From the University

A student may withdraw from the University for reasons of illness or other extenuating circumstances at any time prior to finals week. An official withdrawal form is available at the Academic Advising Center. A student may not withdraw from the University during finals week except with approval of the Registrar. A complete withdrawal from the University will be noted on the student's transcript with a "W". The Registrar will notify affected faculty members when a student has withdrawn from the University. Students who plan to leave the University must complete the official withdrawal form. Failure to do so may result in failing grades. There is no refund of tuition and fees if total withdrawal occurs after the 30th calendar day of the beginning of the quarter. See refund policy for specific details.

Withdrawal From the University Due to Military Exigency

Students who have been called into military service of the United States due to a national emergency will be eligible for withdrawal from the University or the granting of credit. The policy does not apply to regular National Guard or Reserve duty or to annual active-duty requirements.

- Students who must withdraw from the University during the first third of the quarter will be granted a total university withdrawal (W).

- Students who must withdraw from the University during the second third of the quarter may request either an uncontested withdrawal (+W) or an incomplete (I) in each course with specified deadline for completion to be determined by the dean in consultation with the instructor or a total university withdrawal from all courses (W).
- Students who must withdraw from the University during the last third of the quarter may request an uncontested withdrawal (+W) or an incomplete (I) or credit if the coursework is satisfactory, to be determined by the dean in consultation with the instructor or a total university withdrawal from all courses (W). Withdrawals granted by this policy do not count toward the uncontested withdrawal limitations per CWU policy. If credit is awarded, the instructors must report either a letter grade or a satisfactory (S) for each course depending upon the quality of the student's work. If credit is received and the course(s) complete(s) all requirements for the baccalaureate degree, the degree will be awarded.
- In all circumstances, students will be expected to attend classes up to fifteen (15) calendar days prior to induction.
- Students need to contact Registrar Services or their center office as soon as possible to complete the appropriate paperwork, and to submit a copy of the Federal Activation Orders.

Grading Policies and Regulations

"Grade Points" are assigned to each grade as follows:

Grade	Grade Points per Credit
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0.0

A "C" grade indicates that a student has made substantial progress toward meeting the objectives of the course and has fulfilled the requirements of the course. The grades above "C" are used for those students who have demonstrated some degree of superiority. The highest grade, "A", is reserved for those students who have excelled in every phase of the course. The "B" grade is for students whose work is superior but does not warrant the special distinctiveness of the "A". The "D" is a

grade for those students who have made progress toward meeting the objectives of the course but who have fulfilled the requirements only in a substandard manner. The "F" is reserved for students who have failed to meet or have accomplished so few of the requirements of the course that they are not entitled to credit.

The following symbols are also used. No "grade points" are assigned.

S	Satisfactory
U	Unsatisfactory
AU	Audit
W	Indicates a complete withdrawal from the University.
+W	Indicates an uncontested withdrawal from a course.
HW	Indicates a hardship withdrawal from a course.
I	An "I" means the student was not able to complete the course by the end of the term, but has satisfactorily completed a sufficient portion of it and can be expected to finish without having to re-enroll in it. The instructor will designate what a student must do to complete the course, and set a specific date up to one calendar year for the completion of the coursework. It is the student's responsibility to contact the professor and make arrangements to complete the course. If the work is not completed, the Registrar's office will automatically convert the "I" to an "F".
IP	In Progress - A grade is issued when the course is completed. IP is primarily for graduate thesis, project study and Organization Development courses.
INC	Incomplete extended beyond normal limit. Frozen upon program completion.
NR	No grade reported.
NS	No show. No evidence that the student has ever attended class.
Z	Undergraduate in progress. A grade is issued when the course is completed. Course must have prior approval before posting the "Z" grade.

Grade Point Average

Grade point averages will be calculated by dividing grade points earned by the credit hours attempted. Here is a typical example:

Course	Credit Hours	Grade	Grade Points Earned
Mus 104	3	C+	(2.3 x 3) 6.9
Hist 143	5	B-	(2.7 x 5) 13.5
Psych 300	5	C	(2.0 x 5) 10.0
Com 207	4	B	(3.0 x 4) 12.0
Totals	17		42.4

Dividing 42.4 by 17 gives a grade point average of 2.49. In computing cumulative grade point averages, only work attempted at Central will be included in the computation, with the following exception: cumulative grade point average for students in the Teacher Preparation Program will include all coursework from all colleges attended. Within the major, minor and professional education option, grades earned in all allowed courses are used. Credits earned at other institutions are accepted in meeting degree requirements according to the limits described under bachelor's degree requirements.

Credit/No Credit Option

Students are urged to use the credit/no credit option as a way to explore academic areas of interest. Students, except for first quarter freshmen and students on academic probation, may select one course per quarter under this option. Courses taken to meet major, minor, general education, or professional education sequence cannot be taken under the credit/no credit option. A maximum of 15 credits earned in credit/no credit courses may be allowed toward the 180 required for the Bachelor's degree. Courses taken beyond the 15 credit maximum as credit/no credit will be converted to a grade.

Students can designate the course as credit/no credit during registration or by the end of the sixth week of instruction. Courses may not be repeated on a credit/no credit basis.

Credits earned under the credit/no credit option are not included in computing grade point averages. The grade recorded on the student's transcript will be "CR" if the course grade is C- or above, if below C-, the entry will be "NC".

The credit/no credit option is distinctive from courses graded on satisfactory/unsatisfactory basis. Credit/no credit courses will not be allowed toward Master's degree requirements.

New courses for which there are no performance evaluations required for entrance, progress, or completion, and for which attendance is the basis for evaluation, will be graded S/U. Courses graded Satisfactory/Unsatisfactory and the conditions under which they will be so graded must be so identified in the course description in the catalog.

Statute of Limitations on Grade Changes

Grade changes may be filed until the end of the quarter following the one in which they were recorded. Spring quarter grades may be changed until the end of the fall quarter.

Grade Reports

A report of the final grades assigned in courses will be available online at the end of each quarter.

Honor Roll

Undergraduates who achieve a grade point average of 3.5 or higher will be named to the honor roll. To be eligible, a student must complete a minimum of 12 graded credits in the quarter earned. Post-baccalaureate students are not eligible for the honor roll.

Grade Appeal Procedure

Students who believe they have been improperly graded should first attempt to resolve the matter with the instructor. If resolution is not achieved, the student may appeal the grievance to the Department Chair. Failing resolution at that level, the grievance may be submitted to the college Dean. Finally, if the grievance is not resolved at the Dean level, the student may petition for a hearing with the board of academic appeals. For details, contact the Office of the Vice President for Student Affairs and Enrollment Management.

Repetition of Courses

Some CWU courses are approved for repetition with credit awarded each time the course is taken and passed. Such approval is indicated in the course description in the University catalog. Full tuition is assessed for all repeated courses. Other courses may be repeated under the following conditions:

- Students are allowed to take a course a second time. Students attempting to take the same course a third time may do so only with permission of the course instructor and the department chair. Unless otherwise designated as repeatable, courses may not be taken more than three times without permission of dean of the college and department chair.
- Credit will be awarded only once, including credit for transfer courses that are repeated at Central.
- When a course is repeated, only the last grade earned will be used in the computation of the cumulative and major grade point averages. All grades will remain in the student's official record.

Any CWU course repeated at another institution is subject to the following requirements:

- It cannot be transferred in for CWU credit.
- Its grade will not be used in calculating either the CWU or the transfer GPA.
- Under exceptional circumstances, it may be used to waive major or program

requirements with permission of the department chair or the program certification officer.

Incomplete Grades

An "I" means the student was not able to complete the course by the end of the term, but has satisfactorily completed a sufficient portion of it and can be expected to finish without having to re-enroll in it. The instructor will designate what a student must do to complete the course, and set a specific date up to one calendar year for the completion of the coursework. It is the student's responsibility to contact the professor and make arrangements to complete the course. If the work is not completed, the Registrar's office will automatically convert the "I" to an "F".

All incomplete changes exceeding the one calendar year limit, including extensions, must be submitted to Registrar Services for approval.

Students may not re-register for a course in which they received a grade of incomplete. If a student re-registers in an incomplete through his/her own initiative, and the student remains registered in the course beyond the sixth day of the quarter, no refund will be given. The action, although usually unintentional, simulates an actual course repeat in which full fees are assessed.

Scholastic Standards

Academic standards are established by the faculty. The Vice President for Student Affairs and Enrollment Management has responsibility for implementing these standards. A student's academic standing appears on the quarterly grade report. Questions about academic standing should be directed to the Office of Student Affairs and Enrollment Management (Bouillon 204).

Good Standing: A student is in good standing when both the quarterly and cumulative grade point averages (GPA) are 2.0 or higher.

Academic Warning: A student who has been in good standing will be placed on academic warning when the GPA for the previous quarter is below 2.0.

Academic Probation: A student who has been on academic warning will be placed on academic probation if either the quarterly or cumulative GPA is below 2.0.

Academic Suspension: A student who has been on academic probation will be placed on academic suspension if the GPA for the previous quarter is below 2.0. If the GPA for the previous quarter is 2.0 or above, but the cumulative GPA remains below 2.0, the student will remain on academic probation.

Immediately after grade reports are prepared, the Vice President for Student Affairs and Enrollment Management reviews the academic files of all suspended

students and makes one of three decisions:

- The student may be allowed to register for one more quarter with an academic standing of probation.
- The student may be allowed to submit a petition presenting evidence of circumstances beyond the student's control which adversely affected the student's performance during the preceding quarter(s). If the petition presents convincing evidence of such extenuating circumstances, the student will be referred to the academic standing committee. The committee will hear the student's case and may decide to allow the student to enroll for one more quarter on academic probation.
- The student may be denied enrollment for one year, following which a written petition for readmission must be presented to the Vice President for Student Affairs and Enrollment Management. Readmission, however, is not guaranteed.

A letter will be sent to the student informing him/her of the Vice President's decision.

Academic Forgiveness

An undergraduate student may petition the Registrar in writing for academic forgiveness if all of the following criteria are met:

- a. The student returned to CWU after an absence of at least five years.
- b. The student's CWU cumulative GPA at the time of leaving CWU was below 2.0.
- c. The student has earned at least a 3.0 GPA in at least 45 credits since returning to CWU.

If academic forgiveness is granted, the previous credits and grades at CWU will remain on the student's transcript, but will not be used in the calculation of the cumulative GPA, and the student will be in good standing. Only the grades earned since returning to CWU will be used in computing the CWU cumulative GPA.

The student may request a review of the Registrar's decision by the Board of Academic Appeals and Academic Standing. A petition for academic forgiveness may be granted only once. Unless academic forgiveness is granted, the GPA at CWU will include all CWU grades for all courses. The forgiveness policy does not extend to calculating GPA of major or to honors.

Class Attendance and Participation

Instructors may require regular class attendance. The first day of the quarter is the first day of instruction listed in the university calendar. An instructor may drop a student from the class by notifying the Registrar if the student has failed to attend

the class by the end of the third day of the quarter or the first class meeting if the class does not meet during the first three days of the quarter.

A student who does not meet course prerequisites may be required to drop the course. Instructors are not required to offer makeup work for absences.

Sponsors of university-approved activities requiring absence from campus will prepare and sign an official list of the names of those students who plan to be absent. It is each student's responsibility to present a copy of the official list to the appropriate instructors and make arrangements for the absence. Instructors are encouraged to make accommodations.

Members of the university community directing or arranging such activities must adhere to the following guidelines:

- a. Scheduling of such activities shall not overlap with official final examination periods.
- b. Scheduling of such activities shall not require an absence of more than three (3) consecutive class days.
- c. Scheduling of such activities shall be announced to the students far enough in advance for them to plan to fulfill course requirements.
- d. If an exception to these guidelines is needed, the sponsor of the activity will contact instructors to determine whether or not participation in the activity will negatively affect the student's performance or grade.
- e. Seeking permission for an exception lies with the sponsor and not with the student(s).

Athletic Participation

Central Washington University Athletics is governed by the rules of the NCAA Division II and the Great Northwest Athletic Conference. Further information on those rules is available through the Athletic Office, or the office of the Faculty Athletics Representative. University academic requirements for participation require the student athlete to meet the requirements of those athletics organizations as well as:

*Maintain a 2.00 accumulative grade point average at all times

*Be in good academic standing at all times

*Effective Fall 2000, all incoming freshmen and transfer students must complete Health Education 205, Drugs and Sport, by the end of their third year (or junior status) in order to remain eligible for participation in varsity sports.

Course Challenge

(Credit By Examination)

Under certain circumstances, the University may award credit or waive requirements based on course challenges or

prior learning experience. Matriculated students, enrolled on a full-time basis, may challenge any course which appears on the current course challenge list. The following rules apply:

- A course challenge application form, available in the Office of the Registrar, must be completed.
- A fee of \$15 per credit, with a minimum of \$30 per course, must be paid.
- The challenge is conducted according to procedures established by the departments.
- The result of the course challenge is recorded as "S" or "U" on the transcript and is not used in computing grade point average.
- The application to challenge a course will be denied if credit for the course has been received previously at this or another college, the course was previously failed, the student previously withdrew from the course, the course was previously unsatisfactorily challenged, audited or if registration was canceled.
- Credit by examination will not be allowed toward meeting the residence study requirements by the University.
- Graduate students who have been admitted to a graduate program must obtain permission from the Dean of Graduate Studies and Research, their advisor and the course instructor for course challenge.

Course Challenge List

Special courses such as "Individual Study," "Special Topics," "Cooperative Education," "Workshops" and "Seminars" may not be challenged for credit.

Accounting: all undergraduate courses.

Aerospace Studies: no courses are offered for challenge.

Administrative Management: 146, 201, 271.

Allied Health Sciences: some courses may be challenged with approval.

Anthropology: all undergraduate courses with chair's approval.

Art: all undergraduate courses with chair's approval except 101.

Biological Sciences: all undergraduate courses except laboratory courses.

Business Administration: all undergraduate courses.

Business Education: 458.

Chemistry: all undergraduate courses except laboratory courses.

Communication: 101, 250, 252, 340, 350, 445.

Computer Sciences: all undergraduate courses with chair's approval.

Early Childhood Education: no courses are offered for challenge.

Economics: all undergraduate courses.

Education: all undergraduate courses with chair's approval.

English: no courses are offered for challenge.

Environmental Studies: no courses are offered for challenge.

Ethnic Studies: all undergraduate courses with chair's approval.

Family and Consumer Sciences: FCSA 150, FCSN 140, 140LAB, 240, 240LAB, 245, 340, 340LAB, 341, 345, 348, 440, 440LAB, 441,

442, 443, 444, 445, 446, 447, and 448.

Flight Technology: all courses with departmental approval.

Foreign Languages: all undergraduate courses with chair's approval.

Geography: no courses are offered for challenge.

Geology: no courses are offered for challenge.

Health, Human Performance and Recreation: all undergraduate courses.

Health Education: all undergraduate courses.

History: 101, 102, 103, 143, 144.

Humanities: 101, 102, 103.

Industrial and Engineering Technology: all undergraduate courses with chair's approval.

Information Technology: 101, 204, 228, 248, 258, 268, 288, 361, 389, 452, 458, 459.

Law and Justice: all undergraduate courses with director's approval.

Leisure Services: no courses are offered for challenge.

Marketing Education: all undergraduate courses except 331, 445

Mathematics: all undergraduate courses numbered above 170.

Military Science: all 100 and 200 level courses.

Music: all undergraduate courses except applied lessons, class lessons, and performing groups.

Philosophy: all undergraduate courses.

Physics: no courses are offered for challenge.

Political Science: no courses are offered for challenge.

Psychology: all undergraduate courses with chair's approval.

Recreation and Tourism: no courses are offered for challenge.

Religious Studies: all undergraduate courses.

Safety Education: no courses are offered for challenge.

Social Science: no courses are offered for challenge.

Sociology: all undergraduate courses with chair's approval.

Theatre Arts: 107, 166, 363, 364, 365, 371, 373, 381, 383.

Course Substitutions

Students may petition the appropriate department chair if they wish to substitute courses within degree requirements. Course substitutions may not contravene general university policy.

Academic Appeal

The student should be aware that procedures have been established to hear complaints regarding academic matters. The Board of Academic Appeals exists to guarantee due process for academic grievances involving students, faculty, staff, and administrators. The Academic Appeals policy is established by the Faculty Senate and is administered by the Vice President for Student Affairs and Enrollment Management.

Required Participation in Assessment Activities

Students are required to participate in assessment activities at several points during their academic careers. They will be assessed for placement into English 101 and Math 101 and above upon entering CWU as freshmen. Students with deficiencies in English usage/reading or computation must correct them prior to enrolling in ENG 101 or MATH 101 and above respectively.

Once accepted, international students may be evaluated by the ESL staff to determine whether additional English-as-a-second-language coursework will be required during attendance at CWU.

Students will be tested for proficiency in English usage, reading, and computation after the student has completed 90 credits but prior to accumulating 110 credits. Departments may establish their own requirements as long as they meet or exceed University standards. Departments may also require students with deficiencies to correct them before being accepted into the major.

Students will participate in an assessment of intended student outcomes of the general education program.

End-of-major assessments are required prior to graduation.

Graduation Requirements

Students are eligible for award of a bachelor's degree if they fulfill the following requirements established by the faculty:

Credits

- A minimum of 180 quarter credits is required. Students should note, however, that some bachelor's degrees have requirements in excess of 180 credits. Central allows a maximum of 135 quarter (90 semester) credits to transfer from any combination of regionally accredited institutions, including no more than 90 quarter (60 semester) credits from two-year community colleges. Additional course work which exceeds this amount, may be used to meet specific requirements but additional credits will not be allowed to count toward the 180 credit requirement for graduation.
- A minimum of 60 credits of upper division study is required. (These are earned in courses numbered 300 and above.) Credits earned in study at the lower division (courses numbered 100-299) will not be allowed toward meeting this requirement.
- Students must study on the University campus or at an established University

center at least three quarters and earn a minimum of 45 credits. Credits earned through industrial or military experience, or through credit by examination may not be used to meet residency requirements.

- No more than forty-five (45) total quarter credits through CLEP or other sources of non-traditional credit may apply to graduation.
- Transfer students must earn from CWU a minimum of 10 credits in the major and, if a minor is declared, 5 credits in the minor.

Degree Components

- The general education program must be completed as defined in the university catalog.
- Students transferring from Washington state community colleges holding the appropriate academic transfer associate degree will have met the general education program requirements.
- Completion of all requirements for a major as specified by the appropriate department is required.
- Completion of a minor is required when the major contains fewer than 60 credits.
- Foreign Language: students seeking the Bachelor of Arts (B.A.) degree must complete one year college/university study of a single foreign language or two years high school study of a single foreign language.
- Professional Education: all professional education programs require completion of professional education courses in addition to completion of major requirements.

Scholastic Requirements

Graduation and graduation with honors are based on credits and grade-point averages earned at the time the degree is awarded. Once a degree is awarded the academic record is frozen. Changes in grades made after the award of the degree have no effect on the degree. Final responsibility for meeting graduation requirements resides with the student.

- In order to graduate, students must have achieved a cumulative grade-point average of at least 2.0 in courses taken at Central Washington University.
- Students must also have achieved a cumulative grade point average of at least 2.25 in the major field of study. All courses fulfilling the major requirements, including courses accepted in transfer, are used in computing the major grade point average.
- Specific degree and professional certification programs may have more stringent degree requirements than those specified above.

Teacher Preparation Program

- Cumulative grade-point average of at least 3.0 for the last 45 graded credits, OR an overall (all colleges attended) cumulative grade-point average of 3.0.
- Grade-point average of at least 2.5 for major, minor and professional education sequence.

Application for Graduation

Degrees are not automatically awarded when requirements are completed. It is the responsibility of the student to make application in the registration office. Application for the bachelor's degree must be filed by the second Friday of the quarter preceding the quarter in which the degree is to be received. Complete instructions and deadlines are available in registrar services and through center offices.

Exceptions to university graduation requirements must be petitioned to the Registrar. Approval of exceptions must be obtained from the general education committee, department or program chair and responsible dean where appropriate. Exceptions in majors or minors and teacher education programs must be approved by the appropriate department chair and college dean or designee. Final responsibility for meeting graduation requirements resides with the student.

Commencement Participation

Students who have met graduation requirements during the current academic year, summer through winter quarters, and those expecting to meet the requirements during the current spring quarter may participate in the spring graduation ceremony.

Application for graduation or receipt of a degree does not automatically qualify a student for commencement participation. Students must submit to registrar services a commencement participation form prior to the published commencement participation deadline.

Students anticipating graduation the summer quarter following commencement exercises may participate in the graduation ceremony on a space-available basis. Candidates for summer graduation who wish to participate in the spring commencement ceremony prior to issuance of a degree must submit an application for graduation prior to the spring quarter deadline and complete degree requirements by the end of summer quarter. Published acknowledgment of the degree will not take place until the degree is conferred. All honors recognition for summer quarter candidates will be published the following spring.

Students participating in commencement exercises must wear commencement regalia approved by the Registrar. Exceptions to

commencement procedures are approved by the Registrar.

Graduation with Distinction

Baccalaureate honors are awarded to recipients of a first Bachelor's degree according to the following standards:

3.5 to 3.69 - cum laude

3.7 to 3.89 - magna cum laude

3.9 to 4.00 - summa cum laude

Cum laude, magna cum laude, and summa cum laude will be noted on the recipient's diploma and university transcript.

Other distinctions

President's Scholars are those students who have cumulative GPA's in the top 1 percent of their respective college class. GPA is calculated by existing University policy.

Dean's Scholars are those students who, in the current academic year, have cumulative GPA's in the top 5 percent of their respective college class (but not including the top 1 percent). GPA is calculated by existing University policy.

NOTE: Individual study majors will be computed with the College of Arts and Humanities majors.

The following conditions must be met in order to be considered for graduation with distinction:

- At least seventy-five (75) of the credits required for the degree must be earned at Central Washington University with a minimum of 60 credits in courses taken on the A-F graded basis.
- Credits earned by course challenge, CLEP and other national examinations, military experiences or courses, non-college courses and industrial experience will not be allowed toward the 75 credits required for eligibility.
- Honors shall be based on the GPA of all credits earned at Central as well as transfer credits accepted by CWU.

The Registrar will calculate the top percentage for declared graduates based on the end of winter quarter data. Final determination of honors will be made after spring quarter graduation when all grades are recorded.

Students completing degree requirements during the summer who are permitted to participate in the preceding spring quarter commencement will not be eligible for honors recognition until the following spring commencement ceremony.

Concurrent Baccalaureate Degrees

A student may be awarded more than one baccalaureate degree (B.A., B.F.A., B.A. Ed., B.MUS, B.S.) at the same time provided that requirements of both the degree programs

have been completed. Double majors within the same baccalaureate program do not constitute separate baccalaureate degrees.

In disciplines offering multiple Baccalaureate degrees with identical or similar names, e.g. B.A. and B.S. in Biology, only one degree will be awarded. Exceptions to this policy require approval by the department chair and appropriate dean.

Second Baccalaureate Degree

Qualified students seeking second baccalaureate degrees must apply for admission to the university to earn a different type of undergraduate degree associated with a different major. Qualified students are admitted to graduate status; this does not mean, however, that they are enrolled in an "advanced degree program." To receive a second baccalaureate degree, students must complete: (1) all degree requirements not satisfied by the previous degree, and (2) a minimum of 45 quarter credits from Central. Second baccalaureate degree students follow regulations applicable to undergraduates; however, they are not eligible for university honors.

Central Washington University reserves the right to review a post-baccalaureate student's transfer work to determine fulfillment of requirements.



MISSION, RATIONALE AND STUDENT OUTCOMES

The General Education Program offers undergraduate students a liberal arts education in order to cultivate thoughtful and responsible persons and citizens, to prepare them for the world of work, and to teach them to pursue knowledge for its own sake. In order to accomplish those broad goals, the General Education Program seeks to promote effective reasoning, broad and deep learning, and the inclination to inquire.

Effective Reasoning

A comprehensive liberal education helps students to develop their abilities to recognize and to think clearly about important issues and questions. The ability to think clearly involves fluency in reading, writing, and oral communication, as well as mastery of the basic principles of logical, mathematical, and scientific reasoning.

Broad and Deep Learning

A liberally educated person should possess a rich and broad fund of meaningful knowledge as well as the ability to compare and integrate new or different areas of knowledge in fruitful ways. To that end, the general education curriculum imparts a broad understanding of the various liberal arts and sciences and the ways that those arts and sciences evolve. In much the same way, the curriculum aims to foster an appreciation of diversity as a rich source of new ideas and opportunities for learning. Through such studies, students may comprehend the interconnectedness of knowledge and the importance of integrating knowledge gained from disparate parts of the curriculum.

The Inclination to Inquire

An education in the liberal arts fosters a student's commitment to seek out and acquire important knowledge and skills, both for their intrinsic value and for the good they contribute to our common and individual lives. For this reason, a disposition to ask incisive and insightful questions is perhaps the surest sign of a liberally educated mind.

The general education requirement offers a basic knowledge of mathematics and the natural sciences, including laboratory experience, intermediate knowledge of at least one foreign language, the study of the humanities, the political, philosophical, and cultural history of world civilizations, and the foundations and principles of American society.

This mission statement is informed by the standards promulgated by the American Academy for Liberal Education and by CWU's Mission Statement.

General Education Program Goals

1. Students will become thoughtful and responsible members of society and stewards of the Earth.
2. Students will respect diversity of background, experience, and belief, and will value the different perspectives that this diversity brings.
3. Students will achieve fluency in reading, writing, oral communication, and information technology.
4. Students will master the basic principles of logical, mathematical, and scientific reasoning.
5. Students will develop an appreciation of the breadth and depth of scientific and humanistic knowledge.
6. Students will develop a sense of the interconnectedness of knowledge.
7. Students will integrate knowledge from diverse fields of study in order to solve real-world problems.
8. Students will become aware of the manifold ways that knowledge evolves.
9. Students will develop a disposition to ask incisive and insightful questions.

All courses taken to satisfy general education requirements must be taken for a letter grade.

BASIC SKILLS REQUIREMENT

All students must satisfy the following requirements in basic academic and intellectual skills:

- a. UNIV 101, General Education Colloquium (1), or MUS 104, Introduction to Musical Studies (3). Only required of students who enter Central with fewer than 45 credits.
- b. ENG 101 (4) and ENG 102 (4). A grade of C- or better is required in ENG 101 before ENG 102 may be taken.
- c. either MATH 101 (5), MATH 153 (5), MATH 154 (5), MATH 164 (5), MATH 170 (5), or MATH 172 (5);
- d. either MATH 130 (5), PHIL 201 (5), or CS 105 (4);
- e. one year of college or university study of a single foreign language or two years of high school study of a single foreign language. Courses used to satisfy this foreign language basic skills requirements may not be used to satisfy the Philosophies and Cultures of the World breadth requirement;

- f. either CS 101 Computer Basics (4) or IT 101 Computer Applications (3)

All students must have met these basic education requirements by the end of the quarter in which they complete 75 credits. (This does not include the foreign language basic skills requirement, which may require longer to complete.) Students who do not meet this standard will have a hold placed on further course registration. To remove the hold, the student must meet with an advisor and submit a program of study to plan successful completion of this requirement. The student's progress will then be monitored by an assigned academic advisor.

WRITING REQUIREMENT

Four (4) of the courses taken to fulfill the breadth requirement must have the W designation in the list below. These are courses which include at least 7 pages of assigned writing that is assessed for content and mechanics (grammar, spelling, punctuation, and organization).

BREADTH REQUIREMENT

I. ARTS AND HUMANITIES.

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

Literature and the Humanities

A grade of C- or better is required in ENG 101 before taking any of the courses in this category.

- ENG 105(W) The Literary Imagination: An Introduction to Literature (4)
- ENG 247(W) Multicultural Literature (4)
- HUM 101(W) Exploring Cultures in the Ancient World (5)
- HUM 102 (W) Exploring Cultures from 16th Through 19th Centuries (5)
- HUM 103(W) Exploring Cultures in Modern & Contemporary Societies (5)

The Aesthetic Experience.

- ART 101 Introduction to Western Art (5)
- ART 102 Introduction to Non-Western Art (5)
- MUS 101 History of Jazz (5)
- MUS 102 Introduction to Music (5)
- PED 161 Cultural History of Dance (4)
- TH 101 Appreciation of Theatre and Film (4)
- TH 107(W) Introduction to Theatre (4)
- TH 382(W) Ethnic Drama (4)

Philosophies and Cultures of the World.

Foreign Languages 251, 252, or 253. Second year foreign language (same as studied in high school) (5)

or

Foreign Languages 151, 152 or 153. First year foreign language (different than the one used to meet basic skills requirement) (5)

PHIL 101(W) Introduction to Philosophy (5)

PHIL 115(W) The Meaning of Life (5)

PHIL 202(W) Introduction to Ethics (5)

PHIL 209(W) Introduction to Asian

Philosophy (5)

PHIL 210(W) Current Ethical Issues (5)

PHIL 306(W). Environmental Ethics (5)

PHIL 378(W). The Philosophy of Love (5)

RELS 101(W) Introduction to Religion (5)

RELS 201(W) Sacred Books of the World (5)

II. SOCIAL AND BEHAVIORAL SCIENCES

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

Perspectives on the Cultures and Experiences of the United States.

An introduction to the institutions, cultures, and traditions of the United States intended to encourage a critical and analytical understanding of how the past affects the present and the future. An introduction to the complexities of social, economic, and political processes, issues, and events in the United States intended to provide a context for informed decision-making and citizenship.

ECON 101 Economic Issues (5)

ECON 201 Principles of Economics Micro (5)

ETS 101(W) Ethnic Awareness (4)

HIST 144(W) U.S. History Since 1865 (5)

POSC 210 American Politics (5)

SOC 101(W) Social Problems (5)

SOC 205 American Society (5)

WS 201(W) Introduction to Women Studies (5)

Perspectives on World Cultures

An introduction to institutions, cultures, and traditions of nations, groups, and societies outside the United States intended to encourage an understanding and appreciation of the dimensions of human diversity as well as similarities. An introduction to contemporary international and transnational issues intended to provide a broader perspective of the individual's relationship to other cultures and to common human concerns.

ANTH 130(W) Introduction to Cultural Anthropology (5)

AST 102(W) Introduction to Asian Studies (3)

COM 302(W) Intercultural Communication (4)

ECON 102(W) World Economic Issues (5)

GEOG 101 World Regional Geography (5)

HIST 102(W) World Civilization: 1500-1815 (5)

HIST 103(W) World Civilization Since 1815 (5)

LAS 102(W) Introduction to Latin American Studies (5)

POSC 270(W) International Politics (5)

Foundations of Human Adaptations and Behavior

An introduction to and analysis of the fundamental principles underlying human interaction intended to foster a better understanding of the human condition. An introduction to the fundamental patterns and understandings of human interaction with natural and man-made environments intended to help students make informed judgments concerning broad environmental issues.

ANTH 107 General Anthropology (5)

ANTH 120 Introduction to Archaeology (5)

ENST 303 Environmental Management (5)

FCSF 231(W) Human Sexuality (4)

GEOG 108 Introduction to Human Geography (5)

POSC 101(W) Introduction to Politics (5)

PSY 101 General Psychology (5)

PSY 205(W) Psychology of Adjustment (5)

SOC 107 Principles of Sociology (5)

HED 101 Health Essentials (4)

III. THE NATURAL SCIENCES

The natural sciences provide basic methods for rigorously describing and comprehending the natural world. Inquiry-driven laboratory and field observations are an essential mode of teaching, learning, and practicing natural science. Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement. It may be advantageous for students to take courses from groups in the order they appear below.

Fundamental Disciplines of Physical and Biological Sciences

An introduction to those sciences that study the fundamentals of physical and life systems.

BIOL 101 Fundamentals of Biology and Lab (5)

CHEM 111/111LAB Introduction to Chemistry and Lab (5)

CHEM 181/181LAB General Chemistry and Lab (5)

GEOG 101/101LAB Physical Geology and Lab (5)

PHYS 111/111LAB Introductory Physics and Lab (5)

PHYS 181/181LAB General Physics and Lab (5)

Patterns and Connections in the Natural World.

Those sciences that use a knowledge of basic scientific disciplines to examine large and complex physical and life systems.

ANTH 110 Introduction to Biological Anthropology (5) (Lab ANTH 110LAB is optional)

BIOL 200 Plants in the Modern World and Lab (5)

BIOL 201 Human Physiology (5)

BIOL 300 Introduction to Evolution (5)

ENST 301 Earth as an Ecosystem (5)

GEOG 107 Introduction to Physical Geography (5)

GEOG 102/101LAB Geology of National Parks and Lab (5)

GEOG 107 Earthquakes, Volcanoes and Civilization (5)

PHYS 101/101LAB Introductory Astronomy of Stars and Galaxies and Lab (4) (1)

PHYS 102/101LAB Introductory Astronomy of the Solar System and Lab (4) (1)

Applications of Natural Science

These courses explicitly treat social, economic, technological, ethical or other implications of natural phenomena, of human influence on natural systems, or of responsive scientific inquiry.

ANTH 314 Human Variation and Adaptation in Living Populations (4)

BIOL 302 Human Ecology (5)

CHEM 101 Contemporary Chemistry and Lab (5)

ENST 302 Ecosystems, Resources, Population and Culture (5)

FCSN 245 Basic Nutrition (5)

GEOG 273 Geography of Rivers (5)

GEOG 180 Introduction to Environmental Geology (5)

IET 101 Modern Technology (5)

PHYS 103/103LAB Physics of Musical Sounds and Lab (4)

COLLEGE OF ARTS AND HUMANITIES

Administration and Organization

Dean: Liahna Armstrong (Hebeler Hall 202)
Associate Dean: Rosco Tolman (Hebeler Hall 202)

The College of Arts and Humanities (CAH) comprises 10 departments and programs, listed below, which represent the disciplines of the arts and humanities. All departments and some programs of CAH offer undergraduate degrees as well as minors that supplement other degree programs. Several departments offer Master's degrees. In addition to its role in providing degree programs, CAH is responsible for many of the course offerings of the general education program along with extensive service coursework for the entire university. The College also plays a major role in Central's teacher education programs, offering Bachelor's and Master's degrees for students preparing to be secondary teachers and providing coursework in educational foundations and discipline-specific methods for teacher education majors. Building on a legacy of teaching excellence, CAH faculty are engaged in research, creative activities and service, involving students in the scholarship and practical applications of their various academic specializations, while making important contributions to the intellectual tradition and to society at large. There are no special requirements for admission to the College, but some departments have requirements that are described under the respective department and program headings in this catalog.

Departments and Programs

- Department of Art: Michael Chinn (Randall Hall 103)
- Department of Asia/Pacific Studies: Jeffrey Dippmann (Language & Literature Bldg. 337C)
- Department of Communication: Corwin King (Bouillon Hall 232A)
- Department of English: Patricia Callaghan (Language & Literature Bldg. 423)
- Department of Foreign Languages: Joshua Nelson (Language & Literature Bldg. 102-S)
- Department of History: Karen Blair (Language & Literature Bldg. 100)
- Humanities Program: Gerry Stacy (Language & Literature Bldg. 408C)
- Department of Music: Peter Gries (Hertz Hall 101)
- Department of Philosophy: Chenyang Li (Language & Literature Bldg. 337)
- Department of Theatre Arts: George Bellah (McConnell 106)

COLLEGE OF BUSINESS

Administration and Organization

Dean: Roy Savoian (Shaw-Smyser 129)
Associate Dean: John J. Lasik (Shaw-Smyser 127)

COB Web Site: <http://www.cwu.edu-cob>

Departments and Programs

Accounting: Jay D. Forsyth (Shaw-Smyser 318)
Business Administration: Don R. Nixon (Shaw-Smyser 318)
Economics - Robert Carbaugh and Koushik Ghosh (Shaw-Smyser 428)

Accounting Program Directors

Lynnwood Center - Michael Ruble
SeaTac Center - Norman J. Gierlasinski

Business Administration Program Directors

Ellensburg - Steve Schepman
Lynnwood Center - F. Lynn Richmond
SeaTac Center - Don R. Nixon

Mission: The College of Business creates value and opportunity for our students by providing a high quality education at the Ellensburg campus and university centers in the Puget Sound and central regions of Washington state.

Meaning of our Mission: Value and Opportunity

- Through curricula based on theory and on practice, we prepare an increasingly diverse student population with the knowledge, competencies and skills that are necessary for productive careers.
- Our undergraduate and graduate degree programs are offered with the highest emphasis on excellence in teaching, which is strengthened by faculty research and supported by professional service.
- With emphasis on undergraduate education, degree programs are delivered by faculty who are dedicated to using their academic preparation and business experience to enhance student learning.

High Quality Education

- Teaching is our priority. We foster a learning environment where students and faculty work actively together.
- Curricula reflect current needs and developments in business and promote an understanding of theory and its practical application.

- Education at a high level of quality derives from concern for students at the individual level, and personalized, innovative instruction supported by appropriate learning technologies.
- Important linkages are developed with alumni, College of Business Advisory Board, employers and other professionals in business and education.
- We are committed to outcomes assessment and continuous improvement in order to provide a high quality education.

Our Shared Values: The faculty and staff share a set of core beliefs and commitments. We believe in:

- student success
 - lifelong learning
 - integrity and ethical behavior
 - excellence
- We commit ourselves to:
- prepare students for the future
 - impart knowledge on which students can build
 - treat everyone with respect and fairness
 - exemplify our values by serving as teachers and role models
 - maintain professional currency

Programs: The college offers programs leading to the Bachelor of Science degree in the following areas:

- Bachelor of Science, Accounting
- Bachelor of Science, Business Administration with specializations in:
 - Finance
 - General Business
 - Human Resource Management
 - Management and Organization
 - Marketing Management
 - Management Information Systems
 - Operations and Supply Chain Management
- Bachelor of Science, Economics with specializations in:
 - General Economics
 - Managerial Economics

The College also offers a Master of Professional accountancy degree through the graduate school. Students may take their junior and senior years of the Accounting and Business Administration programs at two westside centers: Lynnwood and SeaTac. In addition, upper-division coursework in support of major programs is offered at three eastside centers: Wenatchee, Moses Lake, and Yakima. Please refer to departmental listings in this catalog for more information about each major.

Admission Requirements

Admission requirements to major programs within the College of Business are

identical regardless of the location of the program. Students must first be accepted by Central Washington University and the center which they plan to attend. Then, students must formally apply to the College of Business and be admitted to a major program prior to enrolling in 300-400 level courses within the College of Business. Application forms are available in the center and department offices. The application form must be completed and returned to the appropriate offices along with copies of current transcripts.

Applicants to all degree programs within the College of Business must have achieved a minimum overall GPA of 2.00 in all collegiate studies; further, applicants must have completed English 101 and 102. All course and grade criteria specified here apply to equivalent courses transferred from other institutions.

Admission to the **Accounting or Business Administration** major requires the completion of seven pre-admission courses with a minimum GPA of 2.25 and a minimum grade of "C-" (1.70) in each course. Admission to the **Economics** major requires the completion of four pre-admission courses with a minimum GPA of 2.25 and a minimum grade of "C-" (1.70) in each course. The credit/no credit option will not be accepted for any pre-admission courses.

Transfer Credits

Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any B.S. degree in the College of Business. Upper division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the Department Chair and the College Dean or designee.

Service to Other Majors

Students majoring in programs outside the College of Business who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses. All students must have taken prerequisites for courses prior to enrollment.

COLLEGE OF THE SCIENCES

Administration and Organization

Web Site:

<http://www.cwu.edu/~cots/>

Dean: M. Meghan Miller (Science Building 107)

Associate Dean, Curriculum and Faculty Development: Philip Tolin, (Science Building 107)

Associate Dean, Resource Development: Carin Thomas, (Science Building 302G)

The College of the Sciences (COTS) is comprised of 12 departments and a number of affiliated programs representing disciplines in the behavioral, natural and social sciences as well as mathematics. The departments and programs of the College offer undergraduate baccalaureate degrees, Master's degrees and coursework at the graduate level, minors which supplement other degree programs, and a comprehensive range of service coursework for the entire university. As an essential part of its mission, the College is responsible for extensive course offerings within the general education curriculum. The departments play a major role in Central's teacher education programs, offering Bachelor's and Master's degrees for students preparing to be secondary teachers and providing coursework in educational foundations and discipline-specific content and methods.

Departments within the College are committed to teaching excellence, to active engagement by faculty in research, scholarship and professional service activities, to student involvement in research, and to community service, employing practical applications of the various academic specializations.

Departments

All departments offer baccalaureate degree programs, and in some cases, minors and Master's degrees. In addition to consulting department/program headings in this catalog, students are encouraged to contact individual department and program offices directly.

Anthropology and Museum Studies: Kathleen Barlow (Farrell Hall 309; 963-3201)

Biological Sciences: David M. Darda (Science Building 338; 963-2731)

Chemistry: Carin Thomas (Science Building 302G; 963-2811)

Computer Science: James Schwing (Hebeler Hall 219; 963-1495)

Geography & Land Studies: Karl Lillquist (Lind Hall 119-C; 963-1188)

Geological Sciences: Lisa L. Ely (Lind Hall 219; 963-2701)

Law & Justice: Phil Tolin (Psychology Building 463; 963-3208)

Mathematics: Stuart Boersma (Bouillon Hall 108; 963-2103)

Physics: Bruce Palmquist (Lind Hall 201-A; 963-2727)

Political Science: James Brown (Psychology Building 414; 963-2408)

Psychology: Warren Street (Psychology Building 422; 963-2381)

Sociology: Kirk Johnson (Farrell Hall 409; 963-1305)

Affiliated Programs

Programs offer specialized coursework, interdisciplinary baccalaureate or Master's degrees, minors, or public service functions related to instructional programs.

Allied Health Sciences (Biological Sciences): Sheldon Johnson (Science Building 338H)

Central Washington Archaeological Survey (CWAS, Anthropology): TBA (Farrell)

Energy Studies: James Huckabay (Lind Hall 117A)

Environmental Studies: Christopher Kent (Lind Hall 118-A)

Ethnic Studies (Sociology): Delores Cleary (Farrell Hall 442)

Gerontology (Psychology): Jeffrey Penick (Psychology Building 461)

Geographic Information Systems Laboratory (GIS): Robert Hickey (Lind Hall 119-A)

Organization Development Center (Psychology): Anthony Stahelski (Psychology Building 422)

Primate Behavior and Ecology: Lixing Sun (Science 107)

Public Policy: Rex Wirth (Psychology Building 481)

Resource Management: Geography/Anthropology: Anthony Gabriel (Lind Hall 117-B)/Steve Hackenberger (Farrell Hall)

Science Education: Martha Kurtz (Science Building)

Women Studies: Bang-Soon Yoon (Psychology Building 473)

COLLEGE OF EDUCATION AND PROFESSIONAL STUDIES

Administration and Organization

Web Site:

<http://www.cwu.edu/~ceps/>

Dean: Rebecca S. Bowers

Associate Deans: Ethan Bergman and
Connie Lambert

The primary role of the College of Education and Professional Studies is to support the mission of Central Washington University by offering and supporting educational opportunities of the highest quality for students. The mission of the College of Education and Professional Studies is to prepare enlightened leaders for the professions and for society — leaders who will commit themselves to socially responsible citizenship in a global society.

From the College perspective, its role is fulfilled by creating and nurturing an academic environment where “quality” and “excellence” are synonymous with achievement. Each academic unit of the College has developed specific goals and objectives to complement this mission.

Department Chairs

Aerospace Studies (AFROTC): William M. Major, Lt. Col., USAF (Peterson Hall 203)

Curriculum and Supervision: Connie Lambert (Black Hall 228-10)

Family & Consumer Sciences: Janet S. Bowers (Michaelsen Hall 100)

Flight Technology: Interim Chair, William Trippett (807 Elmview Road, Ellensburg)

Health, Human Performance and Recreation: Robert McGowan (Physical Education Building 114)

Industrial and Engineering Technology: Walt Kaminski (Hogue 107)

Information Technology and Administrative Management: Catherine L. Bertelson (Shaw-Smyser 203)

Military Science (ROTC): Troy W. Kunz, Lt. Col. (Peterson Hall 202-G)

Teacher Education Programs: David Shorr (Black Hall 101)

Center for Teaching and Learning

The Center for Teaching and Learning is the NCATE accredited unit that provides oversight for all CWU school personnel preparation programs. The CTL is intended

to facilitate communication between and among the respective disciplines that contribute to the preparation of educators. CTL programs include the preparation of teachers, school administrators, school counselors, and school psychologists.

Conceptual Framework

Supporting the mission, purpose, and governance structure of the CTL is the “Constructivist” philosophy. This philosophy asserts that:

1. Knowledge is actively created by the learner.
2. Knowledge is “constructed” or made meaningful when learners relate new information to prior knowledge or existing structures of knowledge.
3. Knowledge “constructs” are shaped by experience and social interaction.
4. Members of a culture collaboratively establish knowledge.

The framework for the professional preparation programs is divided into four strands:

1. Facilitator of Learning as Expert Learner.
2. Facilitator of Learning as Knowledge Specialist.
3. Facilitator of Learning as Master of the Art and Science of teaching.
4. Facilitator of Learning as Teacher/Specialist Scholar.

The four strands are interactive. The general education course requirements focus on developing the student as an **expert learner**. The student’s major and minor programs provide the in-depth study required for the **knowledge specialist**. The professional core, including learner outcomes and field experiences, prepares the student to be a **master of the art and science of teaching**. A formal graduate degree program, where the student synthesizes knowledge and experience, establishes the student as a **teacher/specialist scholar**. Ultimately, the overall goal is to prepare teachers, administrators, counselors, and psychologists who are **facilitators of learning in a diverse world**.

The Director of the CTL is James L. DePaepe. For information about the school administrator program, contact the Department of Teacher Education Programs. For information about the school counselor and school psychologist programs, contact the Department of Psychology.

Teacher Preparation Program General Information

The Teacher Preparation Program is administered through the College of Education and Professional Studies and the Center for Teaching and Learning Executive Board. The Provost and Vice President for

Academic Affairs in collaboration with the Dean of the College of Education and Professional Studies appoints faculty to serve on the Advisory Council, which advises the CTL Executive Board on program policies.

Admission Requirements

Admission to the University does not guarantee a student admission into the Teacher Preparation Program. Students must be fully admitted to the Teacher Preparation Program prior to taking any courses in the Department of Teacher Education Program’s majors and minors, or the required professional education foundation courses.

Processing of applications takes time. To insure the thorough review of transcripts, letters of recommendation, etc., it is required that all application materials for admission to the Teacher Preparation Program be submitted by the following dates: Winter, November 1; Spring, February 15; Summer, May 1; Fall, August 1.

Admission Requirements (All application forms are available online at www.cwu.edu/~cert or can be purchased at the University Store on campus.)

1. A 3.0 grade point average for at least the last 45 graded quarter credits (the total may exceed 45 if an entire quarter is needed to achieve the minimum 45). Acceptance can be granted to individuals with a 2.8 GPA, with the provision those individuals meet the 3.0 GPA prior to making application for student teaching and certification. Official transcripts for all college/university coursework must be submitted directly to the Associate Dean’s office. These transcripts are in addition to transcripts submitted to the Registrar Services Office.
2. Completed APPLICATION FOR ADMISSION TO TEACHER EDUCATION.
3. Completed CHARACTER AND FITNESS SUPPLEMENT. Answering “YES” to any question on the form will require that you meet with the Certification Officer prior to a decision regarding admission. All court documents should be submitted prior to that meeting. False answers to the questions on the form may result in denial of program admission and/or certification.
4. Minimum score of 24 on each of two RECOMMENDATION FORMS completed by teachers, employers, or professors (one must be from a professor or teacher). Forms may not be completed by a relative.
5. Signed FINGERPRINTING REQUIREMENT form.
6. Pass the WEST-B examination.
7. Completion of one of the following:
 - Prerequisite Courses: ENG 101 and 102,

and MATH 101, 163.1, 154, 164, 170 or 172.

- Bachelor's degree from an accredited institution.
- A direct transfer agreement Associates Degree.

WEST-B Test

All individuals applying for admission to CWU's Teacher Preparation Program are required to meet the minimum passing score on the WEST-B (Washington Educator Skill Test - Basic). This exam is administered statewide six times each year. Registration information and test dates can be found online at <http://www.west.nesinc.com/>

Note: Failure to begin the program within one year from date of acceptance may result in cancellation of admission.

The completed application packet needs to be submitted to the following address by the appropriate deadline date: Associate Dean, College of Education and Professional Studies, Central Washington University, 400 East University Way, Ellensburg, WA 98926-7414.

Please be aware that:

No grade lower than a C in major or minor, required English composition courses, and foundation coursework, and no grade lower than a C- in basic and breadth coursework will be accepted for certification.

To remain in the program, students must maintain a 3.0 GPA - cumulative, or for the last 45 graded credits earned.

Each applicant for admission to the Teacher Preparation Program will be notified in writing of the status of his/her application.

Completion of the Teacher Preparation Program does not guarantee certification by the state of Washington. In order to be certified, the candidate must demonstrate good moral character and personal fitness as defined by WAC 180-79A-155. Fingerprint clearance from the State Patrol and FBI will be required prior to application for practicum and/or student teaching. If you have anything from your past that you think may compromise your certification, please seek advisement from the Associate Dean, College of Education and Professional Studies, (509) 963-2661, prior to submitting your application.

Teacher Preparation Program admission regulations are administered by the Associate Dean, College of Education and Professional Studies. Personal folders are maintained in the Associate Dean's Office for each student enrolled in a teaching program at Central Washington University.

Transfer Students

Students entering Central Washington University with a transferable Associate of Arts (A.A.) degree from an accredited Washington community college will need to meet the admission requirements for the Teacher Preparation Program prior to enrolling in any education courses. These students are frequently surprised to find that, after finishing two years of community college, they have more than two years left to complete an education degree. This is because the A.A. degree required 90 credits and, when transferred to CWU, satisfies only the Basic and Breadth requirements which can generally be completed in 60 credits at CWU. Community college students can make good use of the additional 30 credits required by the A.A. by selecting courses at the community college which may meet major, minor, or, in some cases, courses in the teacher preparation program. Check your community college's equivalency sheet to make certain your courses are equivalent to CWU's courses for these particular requirements.

WEST-E Test

All teachers wishing to obtain certification after 8/31/05 must pass the WEST-E (also called the PRAXIS II) test in each content area they wish to be endorsed in prior to final certification.

Alternative Admissions Procedures to Teacher Preparation

Students who do not have the required grade point average, or who do not pass portions of the WEST-B Test may apply for provisional admission to the teacher preparation program by alternative means.

PROCEDURE:

1. Applications will be made in writing to the Candidate Admissions, Recruitment, and Retention Committee in care of the CEPS Associate Dean. The written application will include the following:
 - a. A letter from the applicant's major advisor that supports the following:
 - Applicant's academic ability, Service experience, Growth, commitment and motivation,
 - Potential for graduate study (following graduation from the undergraduate program),
 - Potential for success in working with diverse groups,
 - Other criteria appropriate to the applicant's potential as a teacher, and,
 - Other extenuating circumstances that may have affected the applicant's grades and test scores.
 - b. One supporting letter from a former

employer, supervisor, or other individual knowledgeable of the applicant's experiences in working with young people.

- c. A personal essay by the applicant that describes his/her educational goals and objectives.
2. An interview with the Candidate Admissions, Recruitment, and Retention Committee may be required.
3. Those admitted will be monitored on a quarterly basis by the CARR Committee, and will meet all admission requirements prior to student teaching.
4. Students who have been admitted to the Teacher Preparation Program via the CARR will receive personal guidance to facilitate completion of their undergraduate degrees and receipt of their certificates.
5. For further information, contact the Associate Dean of the College.

Graduation/Certification Requirements for Teacher Preparation Program

1. No grade lower than a C in major, minor, composition courses, and professional education foundation courses.
2. Minimum GPA of 2.5 in major, minor, and professional education foundation courses.
3. Minimum GPA of 3.0 for last 45 graded credits or overall cumulative (to include all college coursework).
4. A degree in Elementary Education, Special Education, or Early Childhood Education may not be awarded without certification.

Major and Minor Concentrations

To achieve certification, students must select a major which leads to a University endorsement for teaching in the schools of Washington state.

The following majors are endorsements offered at CWU. Numbers in parenthesis indicate catalog/SIS code. Students should contact the departments to request information about major requirements.

Endorsable Majors

Biology: Teaching Major (1602)
 Business Education Major (1800)
 Chemistry: Teaching Major (1851)
 Early Childhood Education Major (2550)
 Earth Science Major (2600)
 Elementary Education Major (2870)
 English: Teaching Major (3053)
 Family & Consumer Sciences Vocational: Teaching Major (3365)
 Foreign Languages: Teaching (3505),
 Foreign Languages: Teaching Broad Area (3515): Chinese, French, German, Japanese, Russian, and Spanish

History: Teaching Broad Area Major (4011)
 Industrial Education Major (4150, 4160)
 Language Arts Major (4450)
 Marketing Education Major (4975)
 Mathematics: Teaching Secondary Major (5101)
 Music: Broad Area Specialization (5451)
 Music: Choral Music Specialization (5462)
 Music: Instrumental Music Specialization (5463)
 Physical Education: Teaching K-12 Major (6101)
 Physics Major (6250)
 School Health Education Major (7025)
 Social Science: Teaching Secondary Major (7403)
 Special Education P-12 (7815)
 Theatre Arts: Secondary Education Major (8451)
 Visual Art: Teaching Major (1503)

A major endorsement will be required to obtain a teaching certificate. Minor endorsements are optional. The following minors are endorsements offered at CWU. Numbers in parenthesis indicate catalog/SIS code. Students should contact the departments to request information about requirements.

Endorsable Minors

Bilingual Education/Teaching English as a Second Language Minor (1573)
 Biology Teaching Minor (1604)
 Business Education Minor (1800)
 Chemistry Teaching Minor (1851)
 Dance Teaching Minor (2190)
 Early Childhood Education Minor (2550)
 Earth Science Minor (2600)
 English Teaching Minor (3053)
 Foreign Language: Teaching Minors: Chinese (3560), French (3565), German (3570), Japanese (3575), Russian (3580), Spanish (3585)
 Health/Fitness Teaching Minor (3900)
 History Teaching Minor (4015)
 Marketing Education Minor (4975)
 Mathematics: Teaching Secondary Minor (5101) (Math minor will not be endorsed if combined with Elementary Education Major, unless student teaching is also done in the math area.)
 Middle Level Math/Science Minor (7160)
 Physics Minor (6250)
 Reading Minor (6675)
 Science Education Broad Area (7145)
 Teaching English as a Second Language (TESL) Minor (8400)
 Theatre Arts: Teaching Secondary or Grades 4-12 Minor (8450)

Certification

CWU's Teacher Preparation Program is accredited by the National Council for Accreditation of Teacher Education (NCATE). It is also approved by the

Washington State Board of Education to offer programs which lead to teacher certification. To be awarded Washington certificates, candidates must be at least 18 years of age. Completion of requirements for a degree does not guarantee that all requirements for certification have been met. In order to be certified, a candidate must demonstrate good moral character and physical fitness as defined by WAC 180-79A-155. Fingerprint clearance from the State Patrol and FBI will be required prior to application for any practicum and/or student teaching experience.

Graduates of the Teacher Preparation Program are legally qualified for certification in states which are party to the interstate certification compact.

Residency Certificate

The residency certificate is normally awarded simultaneously with the Bachelor's degree. Individuals who hold, or have held a Residency Certificate and are enrolled in a Professional certificate program may have the certificate renewed for an additional two years upon verification the individual is making satisfactory progress in a state approved Professional certificate program.

Individuals who hold, or have held a Residency Certificate who do not qualify for admission to a Professional certificate program may have their Residency Certificates renewed for one additional five-year period by completing 15 quarter credits of college credit coursework from a regionally accredited institution taken since the issuance of the Residency Certificate.

Professional Certificate

Candidates for the Professional Certificate must meet the following requirements:

- Complete provisional status as a teacher in a public school pursuant to RCW 28A.405.220 or the equivalent in a state board of education approved private school.
- Complete an approved Professional Certificate program which has been collaboratively developed by the college/university and the respective Professional Education Advisory Board (PEAB).
- Demonstrate competency in three standards (i.e., Effective Teaching, Professional Development, and Leadership) and the 17 criteria relevant to the three standards.

The Professional Certificate at CWU is comprised of 15 quarter credits over three sections:

ECTL 601: Pro. Cert. Pre-assessment Seminar (4 quarter credits)

Candidates attending this seminar will review standards and criteria for professional certification and, with guidance from their

district and university team members, identify evidence/indicators to meet each criterion using the common Professional Growth Plan format. The Preassessment Seminar will culminate with the approval of the Professional Growth Plan by the Professional Growth Team.

Professional Growth Core (9 quarter credits)

The core of the Professional Growth Plan will differ depending on individual professional development needs of candidates. Candidates may choose to:

Enroll in college courses for credit;
 Enroll in professional development courses. These courses may involve attending workshops and/or conferences, participating in district inservice and staff development activities, completing independent research projects or internships, or other activities as recommended by the Professional Growth Team; or

Combine college courses and professional development courses in order to successfully meet program criteria.

ECTL 609: Pro. Cert. Culminating Seminar (2 quarter credits)

Evidence for each of the Professional Certificate criteria will constitute a portfolio, which will be submitted in electronic and paper formats to the Professional Growth Team for evaluation prior to the culminating seminar. Candidates attending this seminar will present final documentation and evidence of professional certificate level knowledge, skill, and performance. The professional growth team will evaluate the portfolio relative to the requirements of the Professional Certificate and, if the portfolio meets all criteria, make a recommendation for Professional Certification to the CWU Teacher Certification Office.

- Complete the child abuse coursework requirement.

Contact the Teacher Certification Office for more information regarding this program.

Endorsement-Only Program

CWU's Endorsement-Only Program is available to certified teachers who hold the Washington State Initial, Residency, or Continuing Teaching Certificate and who wish to add a teaching endorsement to their certificate. Teachers interested in obtaining an endorsement from CWU should obtain an application on-line at cwu.edu/~cert. Once an application and transcripts are submitted, a credit evaluation will be completed.

Certification Only

Candidates with a bachelor's degree who desire certification must follow the guidelines for admission to teacher preparation. Certification-Only students may earn the Residency Teaching Certificate by

satisfactorily completing the professional foundation courses and at least one college endorsement program. Final approval of the college endorsement program lies with the individual's content area. The Certification-Only program can usually be completed within five to six quarters.

Continuing Certificate

Candidates for the continuing certificate must meet the following requirements:

- Have a valid Initial Teaching Certificate
- Verify at least one year of full-time teaching experience
- Complete 45 credits of upper-division (300 level or higher) coursework, including courses in abuse, staff development and supervision, research and evaluation, and referral agencies

Application forms and further information can be obtained from the Office of the Associate Dean located in Black Hall 228.

To qualify for endorsement to teach in more than one specialization, students must meet the requirements for each specialization. Experienced teachers may petition the Curriculum and Supervision Department for permission to student teach for less than the normal 16 credits.

To maintain the continuing (professional) certificate, each person must complete 150 clock hours of approved inservice education and/or 15 college or university credits every five years.

Recency of Coursework

Education courses may not be older than 10 years at the time of graduation/certification.

OFFICE OF CONTINUING EDUCATION (CE)

The Office of Continuing Education provides lifelong learning opportunities in support of the University mission. The unit offers a variety of credit, non-credit, training and enrichment courses and programs. All programming and services are offered on a self-support basis. Please see our web site (www.cwuce.org) or call 1-800-720-4503 for complete information on the following offerings:

Cornerstone Program (College in the High School)

The Cornerstone Program is designed to offer highly capable students the opportunity to take rigorous college courses while in high school. The courses are taught by qualified high school instructors who have been approved by Central Washington

University for adjunct professor status. All Cornerstone classes are the same challenging courses offered at the university. Courses are offered in English, Math, Sociology, Psychology, Music, Physics, Family and Consumer Sciences and Humanities. The credits earned, if applied at Central Washington University or transferred to another institution, should enhance students' progress toward a degree, reduce the cost of college and strengthen their chances of being accepted to their college of choice. For more information visit www.cwuce.org/cornerstone.

Distance Learning

Distance Learning provides convenient, computer-based learning opportunities for you! Our distance learning courses are delivered either on CD-ROM or over the Web. These courses can be taken in the convenience of your own home or office. For current offerings see our online catalog at www.cwuce.org/distance-learning.

Education

Professional Development for Educators
Numerous classes are available each quarter through in-service and distance learning. Please refer to our online line catalog for current offerings. at www.cwuce.org/catalog.

Professional Certificate Program

This program, offered in collaboration with the Center for Teaching and Learning, allows educators to begin their program for professional certification by enrolling in a Pre-assessment Seminar (ECTL 601) at a variety of locations throughout Washington state. The entire program is designed for flexibility in assisting educators toward professional certification. For more information visit www.cwuce.org/procert.

Open Spaces Technology Center

The Open Spaces Technology Center is university/community partnership for access to computers, software, the Internet and computer training classes. The project serves locations throughout central Washington and focuses on youth. www.cwuce.org/ostc

WEST-B Test Preparation

WEST-B stands for Washington Educator Skills Test - Basic. It is the basic skills test used throughout the state of Washington. All individuals applying for admission to state-approved teacher preparation programs and teachers from other states applying for a Washington residency teaching certificate, are required to meet the minimum passing score on the basic skills

assessment. The Basic Skills Test Prep Course is an interactive CD-ROM that will guide you through all of the subject areas you need to study. For more information visit www.cwuce.org/west-b

WorkSafe Institute of Washington

The WorkSafe Institute of Washington was established in 2000 as a partnership of Central Washington University, Highline Community College and Skagit Valley College. The primary goal of the WorkSafe Institute of Washington is to provide continuing education and training opportunities in safety and health issues to help reduce the incidence of work-related illnesses and injuries. Innovative programs include a two set CD-ROM on 15 passenger van safety (www.vansafety.com). For more information about Worksafe visit www.cwuce.org/worksafe.

World Wine Program

The World Wine Program features learning opportunities for individuals in the wine and associated industries, consumers and those who would like to gain the skills and knowledge to enter the wine industry. The World Wine Program consists of five tracks:

- 1 Wine Trade Professional certificate program - noncredit, intended for individuals who are in the wine and associated industries or those who are interested in enhancing their knowledge and skills to enter the industry.
- 2 Academic track
 - a. A 15-credit Wine Trade Professional certificate program in collaboration with Travel and Tourism
 - b. Three courses as part of a new Travel and Tourism minor
- 3 Trade Training - short noncredit courses customized for the wine industry and associated industries (i.e. lending institutions, retail, etc.)
- 4 Consumer Classes - noncredit short courses targeting CWU and local community with the potential of expanding to other areas in Washington and to CWU alumni.
- 5 International Learning Experiences - guided travel to wine regions throughout the world to experience differing wine cultures and practices. For more information visit www.cwuce.org/wine-education.

Wine Trade Professional Certificate Program

The Wine Trade Professional Certificate is offered through the Office of Continuing Education in collaboration with Recreation and Tourism. It is a comprehensive

educational program that focuses on the business and trade aspects of the wine industry. Topics covered include viticulture, winemaking, world wine regions, styles and trade structures, the business of wine, wine marketing, merchandising and professional evaluation techniques. Graduates will be prepared for careers in wine sales and merchandising, wholesale, retail, distribution, marketing, import/export, consulting, hospitality and more. The Certificate is intended for individuals currently in the wine and associated industries or for those who would like to gain the skills and knowledge necessary to enter the wine industry

Prerequisites:

Students must be over 21 years of age and must apply for acceptance.

Required Courses	Credits
RT 402, Wine Basics	5
RT 403, The Global World of Wine	5
RT 404, The Wine Trade.....	5
Total	15

Additional course fees apply. Students will be expected to spend significant amounts of time outside the classroom working on projects and assignments.

Wine Trade Professional Non-Credit Certificate Program

The Wine Trade Professional Certificate is also offered through the Office of Continuing Education in a non-credit format. It boasts the same course content and challenge but is offered in a schedule that is better suited to working professionals. Program options include an intensive program available at the Ellensburg campus and a weekend format available at the CWU-Lynnwood Center.

Required Courses	Hours
Wine Basics	50
The Global World of Wine.....	50
The Wine Trade.....	50
Total Program	150

THE WILLIAM O. DOUGLAS HONORS COLLEGE

Director: Sura Rath
Language and Literature 408

The William O. Douglas Honors College is Central Washington University's enriched general studies program for talented students. Central to the program is a four-year course of reading, discussing, and writing about the Great Books of the great civilizations of the world with an emphasis on the fundamental works of Western Civilization. Douglas Honors students complete an academic major and other liberal arts courses in addition to the Great Books courses. The Honors College also sponsors cultural field trips and the series of William O. Douglas Lectures in the Humanities as part of its academic program.

The college is named for Supreme Court Justice William O. Douglas, a native of the central Washington city of Yakima. The Douglas Honors College encourages intellectual breadth, academic curiosity, and the fusion of scholarship and everyday life that Justice Douglas personified.

Applicants for the Douglas Honors College should have scored in the upper 10 percent of those taking the Scholastic Aptitude Test (SAT) or the American College Test (ACT) and have earned at least a B grade-point average in certain high school coursework. That coursework should have included three years of English, two years of a foreign language, two years of social science, one year of a laboratory science, three years of mathematics, and three additional years selected from these subjects. Transfer and older students may qualify for the Honors College by showing aptitude and background equivalences.

A student is in **Good Standing** when both the quarterly and cumulative grade-point averages (GPA) are 3.0 or higher. A student who has been in Good Standing will be placed on **Warning** when the GPA for the previous quarter is below 3.0. A student who has been on Warning will be placed on **Suspension** if either the quarterly or cumulative GPA is below 3.0. Students who have been suspended from the Honors College may re-apply if they raise their cumulative GPA to 3.0 or higher. Re-admission is not guaranteed, however.

In order to graduate from The William O. Douglas Honors College, students must have achieved a cumulative grade-point average of at least 3.0 in courses taken at Central Washington University and completed a capstone honors thesis approved by their thesis committee. Students who complete the Honors College program with a grade-point average less than 3.0 may graduate from the University, but without being distinguished as an Honors College graduate.

For additional information students are directed to the Honors College office, Language and Literature Building, Room 408 (509) 963-1445. Informational literature will be mailed on request.

Douglas Breadth Requirements

Required Courses Credits

UNIV 101, General Education Colloquium (1)
OR MUS 104, Introduction to Musical Studies (3)..... 1-3

ENG 101, 102, English Composition 8

NOTE: Students may be exempt from English 101 requirement by examination See the English Department for details.

HIST 101, 102, 103, World Civilization 15

MUS 102, Introduction to Music. 5

NOTE: Music majors or minors may substitute an appropriate course.

Art, Select one of the following: 4

ART 235, Ancient and Medieval Art (4)

ART 236, Renaissance Through Mid-19th Century Art (4)

ART 237, Impressionism through Post Modernism (4)

Natural Science

NOTE: Options may not be chosen from courses that are offered by the student's major department.

Choose 15 credits from the following 15

BIOL 110, 111, 112, 220, Basic, Plant, Animal, and Cellular Biology

CHEM 181, 181LAB, 182, 182LAB, General Chemistry

GEOL 101, 101LAB, Physical Geology

PHYS 111, 111LAB, 112, 112LAB, 113,

113LAB, Introductory Physics

PHYS 181, 181LAB, 182, 182LAB, 183,

183LAB, General Physics

Foreign Language

NOTE: DHC applicants are normally expected to have met the competence requirements for Foreign Language prior to acceptance. Students who have not done so will be required to take classes through Foreign Language 152.

Mathematics

NOTE: DHC applicants are normally expected to have met the competence requirements for Mathematics prior to acceptance. Students who have not done so will be required to take classes through MATH 154.

Douglas Colloquium Sequence

DHC 121, 122, 123, DH Colloquium I 6

DHC 131, 132, 133, DH Lecture I 3

DHC 221, 222, 223, DH Colloquium II 6

DHC 231, 232, 233, DH Lecture II 3

DHC 321, 322, 323, DH Colloquium III 6

DHC 331, 332, 333, DH Lecture III 3

DHC 421, 422, 423, DH Colloquium IV 6

DHC 431, 432, 433, DH Lecture IV 3

Douglas Senior Seminar (Thesis)

DHC 488, Senior Seminar 2

DHC 489, Senior Thesis 3

Major Requirements

The University requirement for concentrated study may be met by completion of the major requirements stipulated by the faculty of the student's chosen field of specialization. The student should read the University Catalog and meet with a major advisor assigned by the student's major department.

General Requirements

The student should read the University's graduation requirements for the bachelor's degree. All of these apply to Douglas students, except that the Douglas program requirements will substitute for the General Education (Basic and Breadth) requirement. This means that students will need to complete 180 total credits, include 60 upper division credits, satisfy the residency requirement, etc.

Douglas Honors College Courses

DHC 121, 122, 123. Douglas Honors College Colloquium I (2,2,2). Prerequisite, admission to Douglas Honors College. Courses must be taken in sequence. Reading, discussing and writing about the Great Books of the Greek and Roman periods.

DHC 131, 132, 133. Douglas Honors College Lecture I (1,1,1). Historical, stylistic, and biographical background relating to the works read in the corresponding colloquium. Concurrent enrollment in DHC 121, 122, or 123.

DHC 221, 222, 223. Douglas Honors College Colloquium II (2,2,2). Prerequisites, admission to Douglas Honors College and DHC 123. Courses must be taken in sequence. Reading, discussing and writing about the Great Books of the Medieval and Renaissance periods.

DHC 231, 232, 233. Douglas Honors Lecture II (1,1,1). Historical, stylistic, and biographical background relating to the works read in the corresponding colloquium. Concurrent enrollment in DHC 221, 222, or 223.

DHC 290. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated for a total of 12 credits. Grade will be S or U.

DHC 296. Individual Study (1-6). Prerequisite, permission of instructor.

DHC 298. Special Topics (1-6).

DHC 321, 322, 323. Douglas Honors College Colloquium III (2,2,2). Prerequisites, admission to Douglas Honors College and DHC 223. Courses must be taken in sequence. Reading, discussing and writing about the Great Books of the 18th and 19th centuries.

DHC 331, 332, 333. Douglas Honors College Lecture III (1,1,1). Historical, stylistic, and biographical background relating to the works read in the corresponding colloquium. Concurrent enrollment in DHC 321, 322, or 323.

DHC 396. Individual Study (1-6). Prerequisite, permission of instructor.

DHC 398. Special Topics (1-6).

DHC 421, 422, 423. Douglas Honors College Colloquium IV (2,2,2). Prerequisites, admission to Douglas Honors College and DHC 323. Courses must be taken in sequence. Reading, discussing and writing about the Great Books of the modern period.

DHC 431, 432, 433. Douglas Honors College Lecture IV (1,1,1). Historical, stylistic, and biographical background relating to the works read in the corresponding colloquium. Concurrent enrollment in DHC 421, 422, or 423.

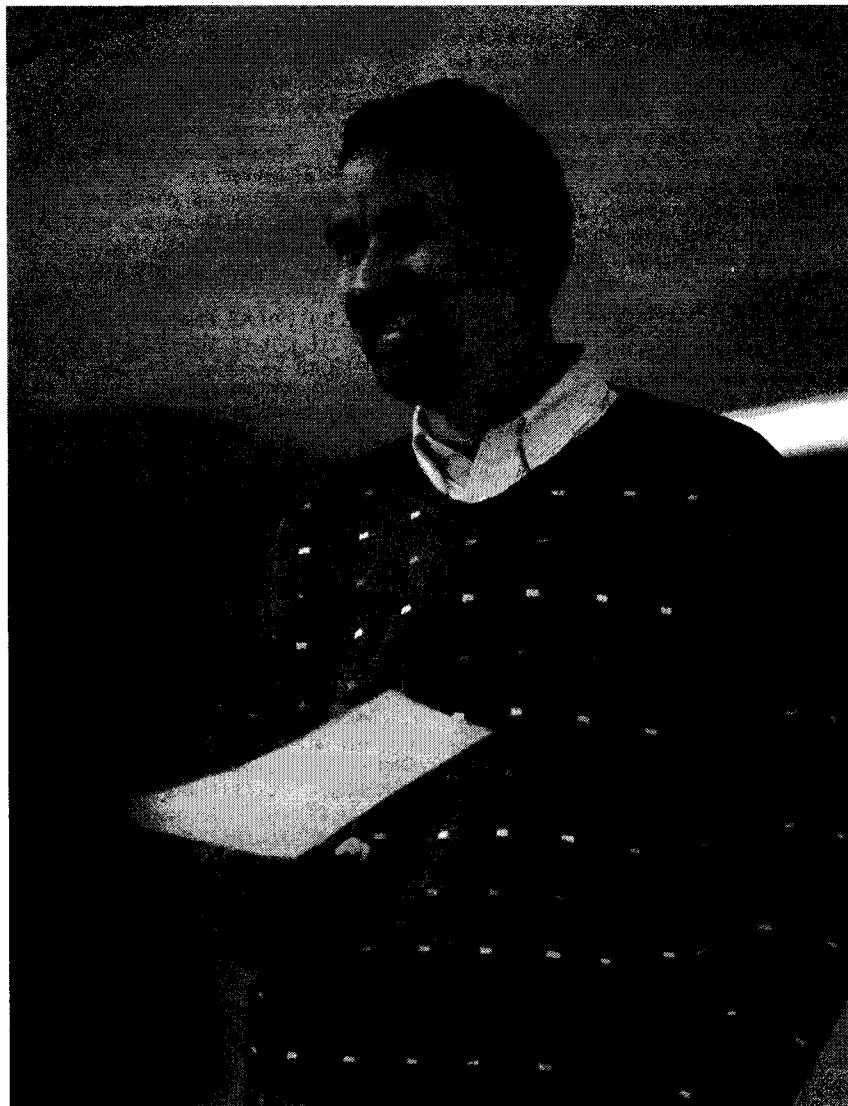
DHC 488. Senior Seminar (2). Prerequisite, Senior standing.

DHC 489. DHC Senior Thesis (3). Prerequisite, DHC 488.

DHC 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated for a total of 12 credits. Grade will be S or U.

DHC 496. Individual Study (1-6). Prerequisite, permission of instructor.

DHC 498. Special Topics (1-6).



Departments, programs and courses are listed in alphabetical order in this section. Courses numbered from 101 through 299 are lower-division courses primarily for freshmen and sophomores; those numbered from 300 through 499 are upper-division courses primarily for juniors and seniors. The numbers 296, 396, 496 and 596 designate individual study courses and are available for registration by prior arrangement with the course instructor and approval of Department Chair.

The number in parentheses following the course title indicates the amount of credit each course carries. Variable credit courses include the minimum and maximum number of the credits within parentheses.

Not all of the courses are offered every quarter. Final confirmation of courses to be offered, information on new courses and programs, as well as a list of hours, instructor, titles of courses and places of class meetings, is available on-line in Safari which can be accessed through the CWU home page at www.cwu.edu. A registration handbook is available at Registrar Services or your university center office. This book will assist you in navigating through Safari.

ACCOUNTING

Faculty Chair: Jay D. Forsyth
Shaw-Smyser 340

Professors

Jay D. Forsyth (SeaTac)
Norman J. Gierlasinski (SeaTac)
Gary W. Heesacker (Ellensburg)
Robert E. Holtfreter (Ellensburg)
Karen D. Martinis (Ellensburg)
Allen C. Vautier (Lynnwood)

Associate Professor:

MaryAnne Atkinson (Lynnwood)
Ronald R. Tidd (Ellensburg)

Assistant Professors

Joseph Bradley (Ellensburg)
Michael Ruble (Lynnwood)

Lecturer

John Lasik (SeaTac)
Frederick McDonald (Ellensburg)

General Information

A Bachelor of Science degree in Accounting is available to students who would like to prepare for careers in public accounting (as Certified Public Accountants), industrial accounting, and nonprofit accounting. The major imparts to students the "common body of knowledge" required of practicing accountants by maintaining a flexible program to meet the needs of a changing society. The student-centered faculty achieve these objectives by developing individual programs, advising students how to meet personal goals and helping the students to secure employment upon graduation.

Certification

Central Washington University Accounting students, within 120 days of obtaining a degree and 225 total credits, or completing the MPA at Central Washington University, are qualified to sit for the Certified Public Accountant examination. State law requires individuals wishing to sit for the CPA examination to have completed (1) a minimum of 36 quarter credits of study in accounting, and (2) a minimum of 36 quarter credits in related business courses. Registration for the examination is made through the State Board of Accountancy, Olympia, Washington. After June 30, 2000, 225 quarter credits will also be required to sit for the CPA exam. Students are also prepared to sit for the Certified Management Accounting examination and the Certified Internal Auditor examination. Students should consult with their major advisor for details.

Transfer Credits

Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any B.S. degree in the College of Business. Upper division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the Department Chair and the College Dean or designee. Transfer students must earn at least 45 credits at CWU.

Service to Other Majors

Students majoring outside the College of Business who are required to take courses in this College for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses.

Bachelor of Science

Accounting Major (1000)

Coursework counting toward the major cannot be taken credit/no credit by Accounting majors.

Admission Requirements

Students must apply and be admitted to the major prior to beginning 300-400 level courses in the College of Business. At the time of application, all 200 level pre-admission requirements should be substantially completed. Application forms are available in the department offices. The completed form must be accompanied by transcripts that reflect all prior college work. Admission shall be based on grades earned in the following courses.

Pre-admission Requirements	Credits
ACCT 251, Accounting I	5
ACCT 252, Accounting II	5

BUS 241, Legal Environment of Business	5
BUS 221, Introductory Business Statistics (prerequisites, IT 101 and MATH 130)	5
ECON 201, Principles of Economics Micro	5
ECON 202, Principles of Economics Macro	5
MATH 153, Pre-Calculus Mathematics I	
OR MATH 170, Intuitive Calculus	
OR MATH 172, Calculus	5
Pre-Admission Total	35

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of "C-" (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The applicant must also have completed ENG 101/102. The applicant must have earned a minimum cumulative GPA of 2.00 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the College Dean or designee.

Required Courses	Credits
FIN 370, Introductory Financial Management	5
MGT 380, Organizational Management	5
MKT 360, Principles of Marketing	5
OSC 323, Operations Management	5
MIS 386, Management Information Systems OR ACCT 455*, Accounting Information Systems	5
MGT 487, Small Business Management OR MGT 489, Strategic Management	5
Select one of the following:	4-5
ADMG 385, Business Communications and Report Writing (5)	
COM 345, Business and Professional Speaking (4)	
ENG 310, Technical Writing (4)	
ACCT 305, Cost Accounting	5
ACCT 346, Income Tax Accounting	5
ACCT 350, Intermediate Accounting I	5
ACCT 351, Intermediate Accounting II	5
ACCT 460, Auditing	5
Electives selected from the following:	15
ACCT 405, ACCT 430, ACCT 431, ACCT 444, ACCT 446, ACCT 450, ACCT 455*, ACCT 461, ACCT 470, ACCT 475, ACCT 484**, ACCT 485, ACCT 489, BUS 341	
Total	109-110

*May not be used as an elective if taken in place of MIS 386.

**ACCT 484, if taken, should be completed no later than fall of senior year.

Additional Graduation Requirements

In addition to the University grade-point average requirements that apply to all CWU major programs, the Department requires a cumulative grade-point average of at least 2.0 in upper-division accounting courses completed at CWU.

Students must complete a minimum of 90 quarter credits of non-business courses, which may include up to 13.5 quarter credits of economics and 9 quarter credits of business statistics. For the remaining non-business credits, courses include all others EXCEPT FOR those with prefixes of ACCT, BUS, ECON, FIN, HRM, MGT, MKT, MIS and OSC.

Transfer students must complete at least 43 CWU business credits to be eligible for the accounting degree.

Accounting Courses

- ACCT 251. Accounting I (5).** An introduction to accounting's business role. Recording and communicating financial information in the revenue, expense, and conversion cycles.
- ACCT 252. Accounting II (5).** Prerequisite, ACCT 251. Accounting for investing and financing activities. Evaluating firm performance.
- ACCT 296. Individual Study (1-6).** Prerequisite, permission of instructor.
- ACCT 301. Financial Accounting Analysis (5).** Not open to students who previously have taken an accounting course. Underlying concepts, preparation and use of financial statements from the user's viewpoint. Not open to accounting and business administration majors except by permission of instructor.
- ACCT 305. Cost Accounting (5).** Prerequisite, ACCT 252. Economics of cost accounting; industrial analysis, production control through costs, types of cost systems, and burden application.
- ACCT 346. Income Tax Accounting I (5).** Prerequisite, ACCT 252. Accounting theory and practices of federal income taxation based on a study of governmental publications - the laws, regulations, and digest of official income tax decisions.
- ACCT 350. Intermediate Accounting I (5).** Prerequisite, ACCT 252. Theory underlying the presentation of current and fixed assets, liabilities, and net worth.
- ACCT 351. Intermediate Accounting II (5).** Prerequisite, ACCT 350. A continuation of the theory underlying the presentation of assets, liabilities and net worth. Financial statement analysis, comparative statements and statement of changes in cash flows.
- ACCT 396. Individual Study (1-6).** Prerequisite, permission of instructor.
- ACCT 405. Advanced Cost Accounting (5).** Prerequisite, ACCT 305. Computation of mix, yield and variances; value of information theory systems design; and decision models relating to control of costs.
- ACCT 430. Accounting for Non-Profit Organizations (5).** Prerequisite, ACCT 252. Accounting and budgetary controls for governmental units and non-profit service organizations, including educational institutions (from school districts to universities) and hospitals. Emphasis is on the advantages, uses, disadvantages, and differences in fund accounting. Students may not receive credit for both ACCT 430 and ACCT 431.
- ACCT 431. CPA Review of Non-Profit Accounting (2).** Prerequisite, ACCT 252. To prepare the student for problems encountered on the CPA exam in non-profit, fund, and governmental accounting. Students may not receive credit for both ACCT 430 and ACCT 431.
- ACCT 444. Tax Research and Planning (5).** Prerequisite, ACCT 346. Tax research, planning, and specific topics including installment sales, real property sales, net operating losses and Internal Revenue Service procedures and penalties.
- ACCT 446. Income Tax Accounting II (5).** Prerequisite, ACCT 346. Tax accounting practice, including gross income deductions, depreciation, capital gains and losses, estates and trusts, corporate problems, and administrative procedures.
- ACCT 450. Advanced Accounting (5).** Prerequisite, ACCT 351. Accounting theory and practice for business combinations and consolidated financial statements, foreign currency transactions and translation, partnerships; also federal bankruptcy, trust and estates.
- ACCT 455. Accounting Information Systems (5).** Prerequisites: ACCT 252, and admission to accounting major or permission. Accounting information system development process and related information systems technologies. Includes the application, control, and audit of accounting information systems.
- ACCT 460. Auditing (5).** Prerequisite, ACCT 351. Auditor's functions and responsibilities. Evaluation of the system of internal control, the determination of appropriate auditing procedures, and the extent of their application.
- ACCT 461. Fraud Examination (5).** Prerequisite, ACCT 350. Recommended, ACCT 460. Detection and prevention of financial statement fraud, and other forms of business fraud.
- ACCT 470. Accounting Theory (5).** Prerequisite, ACCT 351. Accounting literature theory. History, formal statements of principles, special depreciation problems, relationship between economics and accounting, and the effect of price-level changes upon financial statements.
- ACCT 475. International Accounting (5).** Prerequisite, ACCT 351. Explores the formulation and application of accounting principles in other industrialized countries. Particular emphasis directed toward the harmonization of accounting principles between the U.S. and other countries.
- ACCT 484. Professional Writing and Speaking for the Accountant (5).** Prerequisite, ACCT 351. Recommended, ACCT 460. Develop written and verbal communications skills for practical application in public, private and governmental accounting fields. Includes interviewing techniques, preparation and presentation of group and individual reports, and preparation of resumes, letters, memos and workpapers.
- ACCT 485. Current Issues in Accounting (6).** Prerequisite, accounting majors only. Explores current theoretical and practical issues in accounting, including but not limited to GAAP, employment, CPA and CMA examinations, and ethics. Seminar format. Formerly ACCT 499.1. Student may not receive credit for both.
- ACCT 489. Managerial Controllership (5).** Prerequisite, ACCT 305 or permission. Controllers and their organizations and business decision making under conditions of uncertainty with utilization of quantitative techniques.
- ACCT 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- ACCT 492. Volunteer Income Tax Assistance (2).** Prerequisite, ACCT 346. Preparation of tax returns of low income taxpayers, including tax return preparation training.
- ACCT 493. Applied Accounting Techniques (3).** Prerequisite, permission of instructor. Under direct supervision of the instructor, assist in answering accounting students' questions and aid in completion of homework for a minimum of six hours weekly. Other tasks as assigned. Grade will be S or U.
- ACCT 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- ACCT 498. Special Topics (1-6).**
- ACCT 499. Seminar (1-5).**

Undergraduate Courses/ Programs on Reserve

The following courses are on reserve and may be offered subject to program needs:

ACCT 253. Managerial Accounting (5); ACCT 302 Managerial Accounting Analysis (5); ACCT 345 Basic Income Tax (3); ACCT 349 Federal Taxation (5); ACCT 457 Advanced Financial Accounting I (5); ACCT 458 Advanced Financial Accounting II (5); ACCT 495 CPA Examination Review (5); ACCT 497 Honors (1-12); ACCT 5991; ACCT 5992; ACCT 5993; ACCT 5994; ACCT 700.

AEROSPACE STUDIES (AFROTC)

Faculty

Chair: William M. Major, Lt. Colonel, USAF
Peterson Hall 203

Assistant Professors

Kirk P. Bunch, Major, USAF
Rob C. Gleghorn, Captain, USAF

General Departmental Information

The United States Air Force Reserve Officer Training Corps (AFROTC), represented at CWU by Detachment 895 and the 895th Cadet Wing, prepares students to be commissioned as second lieutenants in the U.S. Air Force. Although freshman and sophomore classes are open to all CWU students, the following information is provided primarily for students considering a potential officer commissioning program. Students from any academic major degree program are eligible. Upon award of the baccalaureate degree and successfully completing all other qualifications to become a commissioned officer, graduates are commissioned and enter active duty in one of several exciting career fields. The Air Force is also actively seeking qualified officer candidates in under-represented groups such as African Americans, Hispanics, Native Americans, and women.

AFROTC courses are accredited, and may be taken as an academic minor or as free electives. The AFROTC curriculum offers four-year, three-year, and two-year programs. The freshman and sophomore courses comprise the General Military Course (GMC) portion of the curriculum. The GMC is introductory and developmental in nature, and is designed to motivate and prepare cadets for entry into the advanced portion of the curriculum. GMC students meet once a week for a one-hour academic class, attend a weekly two-hour leadership laboratory and participate in the AFROTC Physical Fitness Program.

The junior and senior courses comprise the Professional Officer Course (POC), which is designed to prepare cadets to assume responsibilities as commissioned officers in the U.S. Air Force. POC classes meet three hours a week, and again there is an accompanying weekly two-hour leadership laboratory. POC

cadets also participate in the AFROTC Physical Fitness Program. It is mandatory that the full two-year POC be completed, even though degree requirements may be met earlier. Graduate studies or a second Bachelor's degree may be allowed to meet this two-year POC requirement.

Another program requirement before entering the POC is participation in summer field training at an Air Force base. Students who have completed the first two years (GMC) of the four-year program, or those with the required amount of prior enlisted service, attend a four-week training camp. Students who did not complete the entire GMC sequence and want to enter the POC (two-year program) attend a six-week summer training camp if qualified.

Enrollment. Enrollment in the freshman and sophomore classes (AFRO 100 and 200 series) creates no obligation to the Air Force. Although enrollment in the Fall quarter of the freshman year is necessary to complete the full GMC sequence, enrollment during any of the freshman or sophomore quarters are accepted and will provide an introduction to the program and to the opportunities afforded an Air Force officer. Students are eligible to enroll in the POC beginning the junior year only after successfully passing the Air Force Officer Qualifying Test (AFOQT), a medical examination, the physical fitness test and summer field training.

Scholarship and Financial Assistance. Air Force ROTC competitive merit scholarships are available and awarded to both non-technical and technical majors. An AFROTC scholarship will normally cover tuition, fees, and books. Those who have never been a full-time college student may apply for a 4-year AFROTC scholarship.

College freshmen and sophomores may apply for a 3-year and 2-year scholarship, respectively. All junior and senior cadets in good standing receive a monthly stipend, separate from any scholarships. Stop by Peterson Hall, Room 203, or call 963-2314 for the latest scholarship information.

Aerospace Studies Minor (1160)

Required Courses	Credits
AFRO 301, Air Force Leadership Studies	3
AFRO 302, Air Force Leadership Studies	3
AFRO 303, Air Force Leadership Studies	3
AFRO 401, National Security Affairs and Preparation for Active Duty	3
AFRO 402, National Security Affairs and Preparation for Active Duty	3
AFRO 403, National Security Affairs and Preparation for Active Duty	3
Total	18

Aerospace Studies Courses

AFRO 101, 102, 103. Foundations of the USAF (1,1,1). A survey course briefly overviewing

Air Force structure, missions, organizations, officership and professionalism, and an introduction to communicative skills.

AFRO 101LAB, 102LAB, 103LAB. GMC Leadership Laboratory (2,2,2). Practical experience in Air Force customs and courtesies, physical fitness, drill and ceremonies, and opportunities available to commissioned officers. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 101, 102, 103. Grade will be S or U.

AFRO 201, 202, 203. The Evolution of USAF Air and Space Power (1,1,1). Through historical examples, we examine the development of Air Force capabilities and missions to demonstrate the evolution of today's USAF air and space power.

AFRO 201LAB, 202LAB 203LAB. GMC Leadership Laboratory (2,2,2). Practical experience in Air Force customs and courtesies, physical fitness, drill and ceremonies, giving military commands, and preparation for field training. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 201, 202, 203. Grade will be S or U.

AFRO 296. Individual Study (1-3). Prerequisite, permission of Department Chair. May be repeated.

AFRO 298. Special Topics (1-6).

AFRO 301, 302, 303. Air Force Leadership Studies (3,3,3). Provides leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer.

AFRO 301LAB, 302LAB, 303LAB. POC Leadership Laboratory (2,2,2). Students plan, organize, coordinate, and direct cadet corps and physical fitness activities, enhancing communication, management, and other leadership skills. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 301, 302, 303. Grade will be S or U.

AFRO 350. Four-Week Summer Field Training (3). Organization, operation, and mission of an Air Force base; physical conditioning; applied leadership training and evaluation; marksmanship; survival orientation; familiarization flying; and field exercises. Grade will be S or U.

AFRO 351. Six-Week Summer Field Training (4). Organization, operation, and mission of an Air Force base; physical conditioning; applied leadership training and evaluation; marksmanship; survival orientation; familiarization flying; field exercises. Grade will be S or U.

AFRO 398. Special Topics (1-6).

AFRO 401, 402, 403. National Security Affairs and Preparation for Active Duty (3,3,3). Examines national security process, regional

studies, advanced leadership ethics, Air Force Doctrine, officership, military justice, and preparation for active duty.

AFRO 401LAB, 402LAB, 403LAB. POC Leadership Laboratory (2,2,2). Advanced leadership experiences involving planning and conducting cadet training and physical fitness activities, oral and written communications, and developing human relations skills. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 401, 402, 403. Grade will be S or U.

AFRO 496. Individual Study (1-3). Prerequisite, permission of Department Chair. May be repeated.

AFRO 498. Special Topics (1-6).

ANTHROPOLOGY AND MUSEUM STUDIES

Faculty

Chair: Kathleen Barlow
Farrell Hall 309

Professors

John A. Alsoszatai-Petheo, Biological Anthropology
Anne S. Denman (Emeritus), American Culture, Intercultural Issues
Steve Hackenberger, Archaeology, Cultural Resource Management, North America and Caribbean
William C. Smith (Emeritus), Archaeology, Museum Studies, Comparative World Prehistory

Associate Professors

Tracy J. Andrews, Sociocultural Anthropology, Ethnicity, Medical and Ecological Anth, Gender; Native North America
Kathleen Barlow, Chair, Sociocultural Anthropology, Psychological Anth, Gender, Art, Museum Studies, Family, Learning; Melanesia/Pacific
Loran E. Cutsinger, Cultural Anthropology, Informal Economy, Gender, Globalization, Caribbean, Russia, Middle East
Patrick McCutcheon, Archaeology, Evolutionary and Environmental Archaeology, Cultural Resource Management

Assistant Professors

Patrick Lubinski, Archaeology, Zooarchaeology, Cultural Resource Management; North America
Lene Pedersen, Sociocultural Anthropology, Visual and Environmental Anth, Postcolonialism; SE Asia (Indonesia), E. Africa, Circumpolar North
Lori A. Sheeran, Biological Anthropology, primate ecology, Black Gibbons; China
Penglin Wang, Linguistic and Cultural Anthropology; East and Central/Inner Asia, China

General Departmental Information

Anthropology presents an integrated perspective on the cultural and biological nature of humans. Anthropologists study present and past human diversity through classroom, laboratory, and field studies in cultural and biological anthropology, including archaeology, linguistics, ethnology, and applied anthropology.

Classes at the introductory (100-level) include a general survey of the field and major sub-fields. Intermediate (300-level) classes focus on selected sub-fields; upper-division standing or relevant lower division anthropology courses are desirable. Advanced (400-level) classes generally assume completion of at least three of the core requirement classes, plus 15 credits in Anthropology. However, prerequisite requirements may be waived with permission of the instructor, or for variable credit classes (490, 491, 496, 498).

Students interested in major and minor programs should contact the department office as soon as possible for further information, application forms, and assignment of an advisor. Anthropology majors are expected to meet with their advisors at least once a quarter.

Special Programs

Reflecting the broad nature of anthropological study, the Department directly sponsors or is affiliated with a wide range of on- and off-campus options to broaden classroom experiences. Further information about the following programs is available through the Anthropology Department office:

- Museum Studies Program, offering coursework, field experiences and projects with local and regional museums
- Central Washington Archaeological Survey (CWAS), a service, research and public information facility with special emphasis in the Northwest
- Primate Behavior and Ecology Bachelor of Science, an interdisciplinary program providing undergraduate training in method and theory of primatology as basis for research, laboratory and field experience
- Resource Management M.S. program, offering an integrated program in natural and cultural resource management, including anthropology classes in cultural resource management and historic preservation
- Macintosh and PC computer labs housed in Farrell Hall
- Center for Spatial Information, providing a range of Geographic Information System (GIS) tools for analysis of social and natural science data
- Summer workshops and field schools, recently including archaeology in Mount Rainier National Park, primate studies in Bali (Indonesia), archaeology and ethnology in Barbados, workshops in Forensic Anthropology

- Study Abroad opportunities coordinated through the CWU Office of International Study and Programs
- Departmental Honors Program encourages individualized research and study in a sub-area of Anthropology. It is open to junior and senior students with Anthropology major GPA of 3.00 or better
- Anthropology Student Association, an active student group which sponsors academic and social events related to the discipline.

Anthropology Core Requirements Credits

ANTH 110, Introduction to Biological Anthropology	5
ANTH 110LAB, Biological Anthropology Laboratory	1
ANTH 120, Introduction to Archaeology	5
ANTH 130, Introduction to Cultural Anthropology	5
ANTH 180, Introduction to Linguistics	5
ANTH 301, Principles and Assessment	2

Anthropology Core Total 23

Bachelor of Science

Anthropology Major (1300)

This major is strongly recommended for students seeking graduate work in anthropology or preparing for careers in closely related fields. Electives are chosen in consultation with the advisor to lead into specialization in areas such as: ethnology, linguistics, archaeology, environmental studies or biological anthropology. Students in this major must have course schedules approved quarterly by their departmental advisors.

Required Courses Credits

Anthropology Core Requirements	23
Select a minimum of one 3-or 4-credit course in each of the following areas: . . .	24
Biological Anthropology (311, 312, 313, 314, 315)	
Archaeology (321, 322, 323, 324, 325, 326, 327)	
Ethnology (333, 334, 336, 350, 354, 355, 356, 357, 358, 359)	
Ethnography (341, 342, 343, 344, 345, 346, 347)	
Linguistics (380, 381, 382*)	
*Students planning on graduate school are strongly advised to elect 382.	
Select one of the following	
Methods courses:	3-4
ANTH 421, Archaeological Theory (4)	
ANTH 442, Comparative Ethnology (4)	
ANTH 444, Ethnographic Field Methods (4)	
ANTH 483, Sociolinguistics (4)	
ANTH 485, Methods and Theory in Biological Anthropology (1-8) or	
ANTH 488, Advanced Research in Cultural Anthropology (1-8)	
ANTH 451, History and Theory of Anthropology	4

ANTH 458, Senior Comprehensive Survey . . . 4	
ANTH 499, Seminar 3-4	
Select one of the following: 4	
ANTH 491, Workshop (1-6)	
ANTH 493, Anthropological Field Experience (1-8)	
ANTH 496, Individual Study (1-6)	
Electives in Anthropology and related fields 8-10	
(Department-approved electives must include a course in statistics.)	

Total 75

Bachelor of Arts Programs

Anthropology Major (1300)

This liberal arts and sciences major provides background to prepare students for any vocation, in that a measure of achievement in all careers is success in human relationships. The major is also consistent with employment in a variety of business, government, and social service areas.

Required Courses	Credits
Anthropology Core Requirements 23	
Select 300 level courses from at least three sub-fields: 15	
Archaeology, Cultural Anthropology, Linguistics, Biological Anthropology	
Anthropology Theory and Method (400 level) 16	
Must include an approved ANTH 499 Seminar	
Department-approved electives 7	

Total 61

Museum Studies Specialization (1305)

The Museum Studies specialization prepares the student for employment in museum settings. Electives may be selected in accordance with student career goals and interests, to include areas such as anthropology, art, biology, business administration, communication, geography, geology, history, etc. The specialization must be supervised and approved by the Department Chair.

Required Courses	Credits
Anthropology Core Requirements 23	
ANTH 360, Introduction to Museum Studies. 4	
ANTH 361, Museum Exhibit Design 4	
ANTH 362, Museum Curation and Management 4	
ANTH 490, Cooperative Education 10	
ANTH 499, Seminar 2	
Department-approved electives 14	
(Must include at least 4 credits in Theory-Method at the 400 level)	

Total 61

Anthropology 45 Credit Major (1295)

This 45 credit major must be accompanied by a major in a discipline related to Anthropology. The program will consist of coursework

focused on areas related to the dual major, and must be designed in close consultation with an Anthropology advisor. A program proposal must be approved prior to admission to this B.A. program.

Required Courses	Credits
Introductory (100 level) 15-20	
Intermediate (300 level) 15-20	
Theory and Method (400 level) 10	

Total 45

Anthropology Minor (1300)

Required Courses	Credits
Select three from the following: 15-16	
ANTH 110, Introduction to Biological Anthropology (5) AND	
ANTH 110LAB, Biological Anthropology Laboratory (1)	
ANTH 120, Introduction to Archaeology (5)	
ANTH 130, Introduction to Cultural Anthropology (5)	
ANTH 180, Introduction to Linguistics (5)	
Department-approved electives 10	
(Students in Teacher Education must include ANTH 324 or 347, and ANTH 355 or 381 within the 10 credits of electives.	
ANTH 381 suggested for those enrolled in Teaching English as a Second Language.)	

Total 25-26

Museum Studies Minor (5440)

The Museum Studies Minor prepares students for entry-level museum-related employment and/or for graduate work in museum studies. To be eligible for admission to this program, students should be enrolled in a related major (e.g., Anthropology, Art, Biology, Geology, Geography, History, Leisure Services, Science Education, etc.).

Approval by the Anthropology Department Chair is also required.

Required Courses	Credits
One of the following: 5	
ANTH 107, General Anthropology (5) OR	
ANTH 130, Introduction to Cultural Anthropology (5) OR	
ANTH 120, Introduction to Archaeology (5) OR	
ANTH 110, Introduction to Biological Anthropology (5)	
ANTH 360, Introduction to Museum Studies. 4	
ANTH 361, Museum Exhibit Design 4	
ANTH 362, Museum Curation and Management 4	
ANTH 490, Cooperative Education 6	
Department-approved electives 7	

Total 30

Anthropology Courses

ANTH 107. General Anthropology (5). Human biological and cultural adaptations: survey of concepts, methods, and perspectives on past and present.

ANTH 110. Introduction to Biological Anthropology (5). A survey of the history, philosophy and theory of biological anthropology including biological relationships to other primate forms, the fossil record, and evolutionary adaptations. ANTH 110LAB should be taken concurrently.

ANTH 110LAB. Biological Anthropology Laboratory (1). Pre or co-requisite: ANTH 110. Practical laboratory experience with data in human osteology, comparative primate anatomy and ethology, forensic anthropology, genetics, and the fossil record of human evolution. Two hours laboratory per week. ANTH 110LAB required for Anthropology majors and minors; optional for students completing breadth requirements of General Education. Formerly ANTH 110.1. Students may not receive credit for both.

ANTH 120. Introduction to Archaeology (5). Introduction to the concepts, methods and development of archaeology.

ANTH 130. Introduction to Cultural Anthropology (5). Understanding human cultures: concepts, methods, and basic data involved in the comparative study of human cultural adaptations.

ANTH 180. Introduction to Linguistics (5). Background, development, and relation to other fields of study. ANTH 180 and ENG 180 are equivalent courses. Students may not receive credit for both.

ANTH 215. Concepts in GIS (3). Basic principles and uses of Geographic Information Systems (GIS). Practice with the use of GIS in solving land management and evaluation problems. Two hours lecture and 4 hours lab per week. ANTH 215 and GEOG 215 are equivalent courses. Students may not receive credit for both.

ANTH 296. Individual Study (1-6). Prerequisite, permission of instructor.

ANTH 298. Special Topics (1-6).

ANTH 301. Anthropology: Principles and Assessment (2). Principles and assessment course for majors: current topics and careers, research, funding; development of assessment portfolios and individual program plans. Required for all B.A., B.S. Anthropology majors at admission.

ANTH 310. Research/Laboratory in Biological Anthropology (1-2). Prerequisite, previous college work in biological anthropology or other natural sciences and permission of instructor. Laboratory research analysis of biological anthropology materials. May be taken concurrently with and as a supplement

- to other 300-level courses in biological anthropology. The course may be repeated up to a cumulative maximum of 8 credits. No more than 10 credits of ANTH 310 and 485 allowed to fulfill B.A. or B.S. requirements.
- ANTH 311. Advanced Biological Anthropology: Principles of Human Evolution (4).** Prerequisites, ANTH 110 and 110LAB or permission of the instructor. Analysis and interpretation of major principles of modern biological anthropology from an evolutionary perspective: genetics, population genetics, ecology, comparative anatomy and human paleontology.
- ANTH 312. Human Origins: The Fossil Evidence (4).** The fossil record of human and protohuman forms. Basic data and interpretation. Three hours lecture and two hours laboratory per week.
- ANTH 313. Primate Social Behavior (4).** Prerequisite, ANTH 107 or 110 or 130 or BIOL 112; or permission of instructor. Survey of field studies of nonhuman primates relevant to the study of human social systems and adaptation.
- ANTH 314. Human Variation and Adaptation in Living Populations (4).** Survey of genetic, morphological and physiological variability of living human populations and their biological source mechanisms. Current population dynamics are used to project future alternatives for change.
- ANTH 315. Forensic Skeletal Analysis (4).** A survey of the human skeleton and techniques of human skeletal analysis. Identification of age, sex, and other traits in modern and extinct populations.
- ANTH 320. Research/Laboratory in Archaeology (2).** Analysis of archaeological materials. Prerequisite, ANTH 120 or permission of instructor. May be repeated, with permission of Department Chair for a total of not more than 6 credits. Minimum of 4 hours laboratory per week. No more than 10 credits of ANTH 320 and 486 allowed to fulfill B.A. or B.S. requirements.
- ANTH 321. Archaeological Methods (4).** Lectures and practical experience in analytical techniques including seriation, stratigraphic correlation, regional integration and settlement pattern studies.
- ANTH 322. World Prehistory (4).** Old and New World prehistory from late Pliocene to the early historic period, including the ecology and development of hunting-gathering, agriculture and state-level societies. ANTH 322 and HIST 322 are equivalent courses. Students may not receive credit for both.
- ANTH 323. Field Archaeology (3-6).** Prerequisite, ANTH 120 or permission. Identification, mapping and recording of archaeological sites; techniques of excavation. Grade will be S or U. May be repeated for credit with permission of Chair.
- ANTH 324. North American Archaeology (4).** Prehistoric cultures of North America, with emphasis on adaptation to changing environments.
- ANTH 325. Prehistory of the Pacific Northwest (4).** Prehistoric cultures of Washington State and adjoining regions.
- ANTH 327. Non-Industrial Technologies (3).** Selected tools and techniques used by non-industrial and prehistoric peoples in adapting to their environments.
- ANTH 333. Culture & Marriage (4).** The reciprocal relationships between the biophysical and cultural components in mating, nurturing and sexual access. Cross-cultural patterns in marriage. ANTH 333 and FCSF 333 are equivalent courses. Students may not receive credit for both.
- ANTH 334. Culture and Criminality (3).** The cultural patterning of criminality: cross-cultural similarities and differences in the ways in which cultures create and maintain social order and cope with social disorder.
- ANTH 336. Anthropology of Aging (3).** Cross-cultural perspectives on aging and on ethnic elderly in pluralistic societies: variations in social and economic statuses of the elderly.
- ANTH 341. Native American Cultures of the Pacific Northwest (4).** Setting and cultural adaptation of the aboriginal peoples of the Northwest Coast and Plateau.
- ANTH 342. Hispanic Cultures of the Western U.S. (4).** This course provides an overview of Hispanic cultures in the American Southwest, California and the Pacific Northwest. Culture change and maintenance through language, religion and an economic resource base are highlighted.
- ANTH 343. Cultures of Africa (4).** Setting and cultural adaptation of sub-Saharan Africa.
- ANTH 344. Cultures of Asia (4).** Setting and cultural adaptation of the peoples of Asia. Representative groups from cultural regions of E. Asia and Central/Inner Asia.
- ANTH 345. Cultures of Southeast Asia and Oceania (4).** Setting and cultural adaptation of the peoples of Southeast Asia and Oceania.
- ANTH 346. Cultures of Latin America and the Caribbean (4).** Survey of anthropological research on cultures of Latin America and the Caribbean in historical and contemporary contexts.
- ANTH 347. Native American Cultures of North America (4).** Setting and cultural adaptation of aboriginal American Indian cultures, and their relation to contemporary issues for Native American cultures.
- ANTH 348. American Culture (3).** A contrastive approach to American culture: values, attitudes, practices of subsistence, economics, politics, kinship, religion in holistic cultural perspective.
- ANTH 349. Contemporary Native American Cultures (4).** Overview of contemporary Native North American cultures including tribal sovereignty and resource management, religion, art, health status and healing practices, cultural continuity and adaptation.
- ANTH 350. Culture, Contact and Ethnicity (4).** Theory and methods for analysis of culture contact situations.
- ANTH 351. Visual Anthropology (4).** Prerequisites, ANTH 130 or ART 225 or COM 321 or 330 or by permission of the instructor. Provides methodological, theoretical and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/manipulation in anthropological and social contexts. ANTH 351 and COM 351 are equivalent courses. Students may not receive credit for both.
- ANTH 354. Anthropology of Religion (4).** A cross-cultural analysis of religion, cosmology and world view.
- ANTH 355. Culture and Personality (4).** A cross-cultural analysis of the relationship of individuals to cultural beliefs and practices.
- ANTH 356. Gender Roles in Cross-Cultural Perspective (4).** Bio-cultural factors affecting human gender roles.
- ANTH 357. Medical Anthropology: Cross-Cultural Perspectives on Health and Healing (4).** Emphasizes cultural and biological factors influencing health maintenance in human populations and cross-cultural perspectives on illness, healing and the provision of health care.
- ANTH 358. Culture and Politics in a Global Economy (4).** Comparative perspectives on cultural process of change within the global economic system.
- ANTH 359. Survey of Music in Cross-Cultural Perspectives (3).** An introduction to ethnomusicology: the cultural context of music with emphasis on Africa, Asia, North and South America, and Oceania. ANTH 359 and MUS 359 are equivalent courses. Students may not receive credit for both.
- ANTH 360. Introduction to Museum Studies (4).** Concepts relating to museums in society: history, ethics, philosophy, administration, legislation and education.
- ANTH 361. Museum Exhibit Design (4).** Principles of design applied to visual presentation of material culture, ideas and concepts through educational exhibits.
- ANTH 362. Museum Curation and Management (4).** Application of techniques of environmental security, restoration and preservation in the management of museum collections.
- ANTH 380. Nonverbal Communication (4).** Interpretation and analysis of four categories of nonverbal behavior: paralanguage, action language, object language, and uses of space and time. Formerly COM 280/ANTH 280.

- ANTH 380 and COM 380 are equivalent courses. Students may not receive credit for both.
- ANTH 381. Language in Culture (4).** Language as a culture trait. Influence of language on other human institutions. Includes psycholinguistics, sociolinguistics, ethnographic semantics, and multilingualism in its sociocultural setting.
- ANTH 382. Descriptive Linguistics (4).** Introduction to the basic concepts and mechanics of formal linguistic analysis.
- ANTH 398. Special Topics (1-6).**
- ANTH 404. Intermediate GIS (4).** Prerequisite, GEOG 303/403 or permission. Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. ANTH 404, GEOL 404 and GEOG 404 are equivalent courses. Students may not receive credit for more than one. Formerly ANTH/GEOG/GEOL 385.
- ANTH 412. Long Term Primate Studies (4).** Prerequisite, ANTH 313. A survey of major long term field research projects including apes, monkeys and lemurs; comparisons across sites and results of long term observation of non-human primates.
- ANTH 414. Forensic Anthropology: Cold Case Analysis (6).** Prerequisites, ANTH 110, ANTH 315, ANTH 310 and permission of the instructor. The course explores the recovery and examination of skeletal remains through practical experience in the recovery of buried remains. Students will plan, manage, and conduct a forensic skeletal analysis of a cold case. Findings will be presented.
- ANTH 415. Forensic Anthropology: Theoretical and Applied Issues (4).** Prerequisites, ANTH 110, ANTH 315, ANTH 310 and permission of the instructor. An in depth and critical analysis of journal articles pertaining to forensic anthropology, osteology, and archeology. An examination of archaeological techniques that can be adapted to forensic and medico-legal investigations.
- ANTH 416. Pongid Behavior (4).** Prerequisite, ANTH 313. An overview of Pongid (chimpanzee, gorilla and orangutan) physiology, social and developmental behaviors in natural and laboratory conditions.
- ANTH 417. Advanced GIS (4).** Prerequisite, GEOG 404, ANTH 404, or GEOL 404 or permission of instructor. Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. ANTH 417, GEOL 417 and GEOG 417 are equivalent courses. Students may not receive credit for more than one.
- ANTH 418. Primate Evolution (4).** Prerequisites, ANTH 110, ANTH 313. An overview of primate evolution from the earliest forms to modern representatives. Fossils, paleoenvironments, adaptive radiations and evolutionary trends among the primates.
- ANTH 421. Archaeological Theory (4).** Prerequisite, ANTH 120, or permission. Discussion of research problems in data collection, analysis, and interpretation.
- ANTH 425. Zooarchaeology (4).** Prerequisites, ANTH 120 and either ANTH 110LAB or BIOL 112, or permission. Mammalian osteology and methods in the analysis of animal bones from archaeological sites.
- ANTH 440. Ecology and Culture (4).** Investigation into interdependent environmental and human cultural systems. Traditional agroecologies and subsistence strategies; contemporary problems of resource management, social equity, political ecology, and sustainable development. ANTH 440 and GEOG 440 are equivalent courses. Student may not receive credit for both.
- ANTH 442. Comparative Ethnology (4).** A study of the analytical frameworks used in comparing cultures.
- ANTH 444. Ethnographic Field Methods (4).** Methods used in ethnographic field work.
- ANTH 451. History and Theory of Anthropology (4).** Prerequisite, 20 hours of ANTH or permission. Content and developmental history of anthropological theories and methods.
- ANTH 456. Principles of Anthropology for Teachers (4).** Concepts related to human biological and cultural adaptation, with emphasis on applicability to public school teaching (K-12).
- ANTH 458. Senior Comprehensive Survey (4).** Prerequisite, ANTH major or permission. Advanced comprehensive survey of the field of anthropology as to its content and intent. Specifically designed for majors preparing for graduate work.
- ANTH 459. Senior Colloquium (3).** A capstone seminar for the Anthropology B.A. The seminar reinforces interdisciplinary preparation and knowledge in one field of anthropology (linguistics, ethnology, archaeology, or biological anthropology).
- ANTH 480. Survey of Linguistics (4).** Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ANTH 480 and ENG 480 are equivalent courses. Students may not receive credit for both.
- ANTH 483. Sociolinguistics (4).** Prerequisite, ANTH/ENG 180 or 480, ANTH 381, or FNLA 481 or departmental approval. Concepts and methods of sociolinguistic analysis in first and second languages. Will examine differences among cultures in the relationship between language usage and inequality. ANTH 483 and FNLA 483 are equivalent courses. Students may not receive credit for both.
- ANTH 485. Method and Theory in Biological Anthropology (1-8).** Prerequisite, Introductory plus 5 upper-division credits in biological anthropology or corresponding coursework in the biological sciences. Methods and techniques, research problems, data collection, analysis, interpretation. Laboratory orientation. May be repeated up to 8 credits. Formerly ANTH 495.1.
- ANTH 486. Advanced Methods in Archaeology (1-8).** Prerequisite, 5 upper-division credits in archaeology. Archaeological research design; planning and supervision of laboratory and field operation; preparation of reports for publication. May be repeated up to 8 credits. No more than 10 credits of ANTH 320 and 486 allowed to fulfill B.A. or B.S. requirements. Formerly ANTH 495.2.
- ANTH 487. Field Linguistics (1-8).** Prerequisite, ANTH 382 or permission. A laboratory oriented course providing both demonstration and practicum in recording, transcription, and structure of languages. Tapes and field derived data. May be repeated up to 8 credits. Formerly ANTH 495.3.
- ANTH 488. Advanced Research in Cultural Anthropology (1-8).** Prerequisite, ANTH 130 or equivalent, plus 5 upper-division credits in cultural anthropology. May be repeated for credit up to a total of 8 credits. Formerly ANTH 495.4.
- ANTH 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated.
- ANTH 491. Workshop (1-6).**
- ANTH 492. Anthropological Teaching Experience (1-2).** Prerequisite, 15 credits in anthropology; permission of instructor and Department Chair. May be repeated; a maximum of 6 credits to count toward major. Grade will be S or U. Formerly ANTH 494.
- ANTH 493. Anthropological Field Experience (1-8).** Prerequisite, permission of instructor and Department Chair. Individual or group off-campus experience in the field study of anthropological phenomena. This course may be repeated for full credit.
- ANTH 494. Applied GIS Project (2-6).** Prerequisite, ANTH/GEOG 215 and permission of instructor. GIS projects in Anthropology, Biology, Geography, Geology, Resource Management. May be

repeated for credit. ANTH 494, GEOG 494 and GEOL 494 are equivalent courses. Formerly ANTH 492.

ANTH 496. Individual Study (1-6). Prerequisite, permission of instructor.

ANTH 498. Special Topics (1-6).

ANTH 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following course is on reserve and may be offered subject to program needs:
ANTH 326 Archaeology of Mexico (3).

ART

Faculty

Chair: Michael Chinn
Randall 103

Professors

Michael Chinn, Wood Design, Design

Associate Professor

Glen Bach, Director of Graphic Design
William Folkestad, Art History and Criticism
Keith Lewis, Jewelry & Metalsmithing, Design

Assistant Professors

Stephen Chalmers, Photography
Ovidio Giberga, Ceramics, Design
Brian Goeltzenleuchter, Painting, Drawing
Donna Stack, Sculpture, Design
Shari Stoddard, Art Education

General Departmental Information

The Department of Art is the primary agent for the study and practice of visual culture at Central Washington University. Through our programs and affiliated course offerings we transmit knowledge which enables our students to assume their respective roles as practitioners, educators, and informed patrons of the visual arts. We strive to enhance our students' understanding of the diversity and unity, the traditions and innovations, the freedom and restraint of both visual and physical imagery. It is additionally the department's goal to facilitate liberal learning and academic excellence through instruction which is sensitive to the needs of a diverse student body, and is attentive to the technological and economic realities of an increasingly visual culture.

Our undergraduate curricula provides opportunities for study in studio art, graphic design, and art education with allied course offerings in art history and criticism. In addition, we offer minors in art studio, art history and art education for students in other disciplines who wish to supplement their majors.

Students can complete any of our degree programs in four years provided they work closely with an advisor beginning their freshman year and take courses in the recommended sequence.

**Bachelor of Fine Arts in Art
Graphic Design Specialization
(1558)**

A comprehensive studio art degree for students desiring to pursue careers in the field of graphic design and visual communications. The program emphasizes critical thinking through the exploration of digital and print media. After completion of the Art core and pre-Graphic Design prerequisites students are required to complete the Graphic Design Concentration requirements, including a contracted field experience. Transfer students are encouraged to complete as many of the transferable Art requirements as possible prior to enrolling at CWU.

An Apple Macintosh computer and appropriate software is recommended prior to beginning the Major Core requirements.

Art Core Requirements	Credits
ART 150, Drawing I	4
ART 170, Basic Design I	4
ART 171, Basic Design II	4
ART 250, Drawing II	4
ART 235, Ancient to Medieval Art	4
ART 236, Renaissance through Mid 19th-Century Art	4
ART 237, Impressionism through Postmodern Art	4

Pre-Graphic Design Requirements ...	Credits
ART 225, Photography I	4
ART 274, Typography	4
ART 351, Illustration I	4
ART 374, History of Graphic Design	4
ART 384, Computer Art I	4
Select two courses from:	8
ART 260, Painting I (4)	
ART 360A, Painting II (4)	
ART 262, Watercolor I (4)	
ART 362A, Watercolor II (4)	
Select one course from	4
ART 325A, Photography II (4)	
ART 325B, Photography II-Alternative Processes (4)	
ART 325C, Photography II-Digital Imaging (4)	

Graphic Design Requirements	Credits
ART 370, Layout and Design I	5
ART 371, Layout and Design II	5
ART 372, Design and Production I	5
ART 414, Recent Art	4
ART 451, Illustration II	4
ART 470, Advertising Graphic Design	4

ART 471, Corporate Graphic Design	4
ART 472, Design and Production II	4
ART 490, Cooperative Education (Internship)	10
ART 495, Studio Project	1

Total 106

Studio Art Specialization

A comprehensive studio art degree for students desiring to pursue studio art-related careers or seeking artistic enrichment, with disciplinary studies in:

- Ceramics (1560)
- Computer Art (1562)
- Drawing (1564)
- Jewelry/Metalsmithing (1566)
- Painting (1568)
- Photography (1570)
- Sculpture (1572)
- Wood Design (1574)

In addition to core and other required courses, students are required to complete a 24 credit "area of concentration" requirement in a single discipline. Transfer students are encouraged to complete as many of the transferable Art requirements as possible prior to enrolling at CWU.

Art Core Requirements	Credits
ART 150, Drawing I	4
ART 170, Basic Design I	4
ART 171, Basic Design II	4
ART 250, Drawing II	4
ART 235, Ancient to Medieval Art	4
ART 236, Renaissance through Mid 19th-Century Art	4
ART 237, Impressionism Through Postmodern Art	4

Required Courses	Credits
ART 225, Photography I	4
Select one course from:	4
ART 260, Painting I (4)	
ART 262, Watercolor I (4)	
ART 280, Sculpture I	4
ART 241, Wood Design I	4
ART 246, Jewelry/Metals I	4
ART 265, Ceramics I	4
ART 384, Computer Art I	4
ART 389, Contemporary Concepts in Art	4
ART 414, Recent Art	4
Select one course from:	4
ART 357, African and Oceanic Art (4)	
ART 456, History of Eastern Art (4)	
Select one course from:	4
ART 360A, Painting II (4)	
ART 360B, Painting II (4)	
ART 362A, Watercolor II (4)	
ART 325A, Photography II (4)	
ART 325B, Photography II-Alternative Processes (4)	
ART 325C, Photography II-Digital Imaging (4)	

ART 350, Drawing III (4)	
ART 484, Computer Art II (4)	
Select one course from:	4
ART 380A, Sculpture II (4)	
ART 341, Wood Design II (4)	
ART 346, Jewelry/Metals II (4)	
ART 365A, Ceramics II (4)	
ART 365B, Ceramics II-Wheel Throwing(4)	
ART 495, Studio Project	1
Major Concentration	
Select from:	24
Ceramics, Computer Art, Drawing, Jewelry/Metals, Painting, Photography, Sculpture, Wood Design	
Advisor-Approved Upper Division	
Electives	4
Total	105

Bachelor of Arts Art Major (1500)

Required Courses	Credits
ART 150, Drawing I	4
ART 250, Drawing II	4
ART 170, Basic Design I	4
ART 171, Basic Design II	4
ART 235, Ancient and Medieval Art	4
ART 236, Renaissance Through Mid-19th Century Art	4
ART 237, Impressionism Through Postmodern Art	4
ART 414, Recent Art	4
Select from the following:	4
ART 260, Painting I (4)	
ART 262, Watercolor I (4)	
ART 225, Photography I	4
ART 246, Jewelry/Metals I	4
ART 265, Ceramics I	4
ART 280, Sculpture I	4
ART 241, Wood Design I	4
ART 384, Computer Art I	4
Select 12 credits from the following:	12
ART 324, History of Photography (4)	
ART 325A, Photography II (4) or	
ART 325B, Photography II-Alternative Processes (4) or	
ART 325C, Photography II-Digital Imaging (4)	
ART 341, Wood Design II (4)	
ART 346, Jewelry/Metals II (4)	
ART 350, Drawing III (4)	
ART 357, African and Oceanic Art (4)	
ART 360A, Painting II (4) OR	
ART 360B, Painting II (4)	
ART 362A, Watercolor II (4)	
ART 365A, Ceramics II-Handbuilding (4) OR	
ART 365B, Ceramics II-Wheel Throwing (4)	
ART 380A, Sculpture II (4)	
ART 384, Computer Art I (4)	
ART 389, Contemporary Concepts in Art (4)	
ART 410, Art of the Italian Renaissance (4)	
ART 415, Painters and Printmakers of Northern Europe (4)	

ART 453, Art of the United States (4)	
ART 456, History of Eastern Art (4)	
ART 495, Studio Project	1
Total	73

Visual Art: Teaching Major (1503)

This major satisfies the endorsement for Visual Arts.

A comprehensive visual-art program which qualifies students to teach art at either the elementary or secondary levels in regular or self-contained classrooms. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
ART 150, Drawing I	4
ART 250, Drawing II	4
ART 170, Basic Design I	4
ART 171, Basic Design II	4
Select one Painting course:	4
ART 260, Painting I (4)	
ART 262, Watercolor I (4)	
ART 225, Photography I	4
ART 265, Ceramics I	4
ART 246, Jewelry/Metals I	4
ART 280, Sculpture I	4
ART 330, Art in the Elementary School	4
ART 430, Components of Art Education	4
ART 432, Art in Secondary School	4
ART 235, Ancient and Medieval Art	4
ART 236, Renaissance Through Mid-19th Century Art	4
ART 237, Impressionism Through Postmodernism	4
ART 495, Studio Project (must be taken in one of the last two quarters prior to graduation)	1
Total	61

Art Studio Minor (1505)

Required Courses	Credits
Select one course:	4
ART 150, Drawing I(4)	
ART 170, Basic Design I (4)	
Select one course:	4
ART 235, Ancient and Medieval Art (4)	
ART 236, Renaissance Through Mid-19th Century Art (4)	
ART 237, Impressionism Through Postmodernism (4)	
ART 414, Recent Art (4)	
Select 16 credits from the following:	16
ART 150, Drawing I (4)	
ART 225, Photography I (4)	
ART 241, Wood Design I (4)	
ART 246, Jewelry/Metals I (4)	
ART 250, Drawing II (4)	
ART 260, Painting I (4)	
ART 262, Watercolor I (4)	

ART 265, Ceramics I (4)	
ART 280, Sculpture I (4)	
ART 325A, Photography II (4) OR	
ART 325B, Photography II-Alternative Processes OR	
ART 325C, Photography II-Digital Imaging (4)	
ART 341, Wood Design II (4)	
ART 346, Jewelry/Metals II (4)	
ART 350, Drawing III (4)	
ART 360A, Painting II (4)	
ART 362A, Watercolor II (4)	
ART 365A, Ceramics II (4)	
ART 380A, Sculpture II (4)	
ART 384, Computer Art I (4)	
ART 484, Computer Art II (4)	
Total	24

Art History Minor (1520)

Required Courses	Credits
Select 24 credits from the following:	24
ART 235, Ancient and Medieval Art (4)	
ART 236, Renaissance Through Mid-19th Century Art (4)	
ART 237, Impressionism Through Postmodernism (4)	
ART 357, African and Oceanic Art (4)	
ART 410, Art of the Italian Renaissance (4)	
ART 414, Recent Art (4)	
ART 415, Painters and Printmakers of Northern Europe (4)	
ART 453, Art in the United States (4)	
ART 456, History of Eastern Art (4)	
Total	24

Art Courses

- ART 101. Introduction to Western Art (5).** The visual arts as an expression of the human experience. Does not apply to the art major.
- ART 102. Introduction to Non-Western Art (5).** A survey of non-western painting, sculpture and architecture. This course does not apply to the art major.
- ART 150. Drawing I (4).** Studio experience emphasizing the understanding of form and composition through the use of various drawing materials and techniques. May include drawing from the figure. Six hours studio per week.
- ART 170. Basic Design I (4).** Study of elements and principles of two-dimensional design. Development of conceptual clarity and technical skills, with emphasis on design vocabulary and visual analysis. Six hours studio per week.
- ART 171. Basic Design II (4).** Prerequisite, ART 170. Exploration of the elements and principles of design in three-dimensional media. Emphasis on the development of design vocabulary, conceptual clarity, visual analysis and technical proficiency. Six hours studio per week. Formerly ART 270. Student may not receive credit for both.

- ART 224. Photography for Non-Majors (4).** A basic course covering black and white photography and photographic concepts for non-art majors. Six hours studio per week.
- ART 225. Photography I (4).** A basic course covering equipment, processes of black and white photography, concepts, and practical darkroom methods. Six hours studio per week.
- ART 235. Ancient and Medieval Art (4).** A historical survey of Western Art from ancient times through the Gothic period.
- ART 236. Renaissance Through Mid-19th Century Art (4).** Prerequisite, ART 235. A historical survey of Western Art from the Renaissance to Impressionism. Formerly ART 336. Student may not receive credit for both.
- ART 237. Impressionism Through Postmodernism (4).** Prerequisites, ART 235 and ART 236. Art in Europe and the United States from Impressionism through Postmodernism. Formerly ART 337. Student may not receive credit for both.
- ART 241. Wood Design I (4).** Introduction to wood as an artistic and design medium. Emphasis on visual communication utilizing basic shaping and finishing process. Six hours studio per week.
- ART 246. Jewelry/Metals I (4).** Design and construction of jewelry and small-scale metal objects. Emphasis on technical skill-development and introduction to contemporary work. Six hours studio per week. Formerly ART 347. Student may not receive credit for both.
- ART 250. Drawing II (4).** Prerequisite, ART 150. A continuation of ART 150 with an emphasis on technique, composition and interpretation of ideas. Includes drawing from the figure. Six hours studio per week.
- ART 252. Introduction to Drawing the Figure (3).** Prerequisite, ART 150. An introduction to the basics of design and structure in drawing the figure.
- ART 260. Painting I (4).** Prerequisite, ART 150, 170, or permission of instructor. An introduction to the techniques of painting for expressive purposes. Six hours studio per week.
- ART 262. Watercolor I (4).** Prerequisite, ART 150. An introduction to the techniques of transparent watercolor and the visual problems of painting. Six hours studio per week.
- ART 264. Traditional Chinese Painting (3).** An introduction to the practice of the different styles of traditional Chinese painting. Will include the study of the traditional composition, aesthetic and theory.
- ART 265. Ceramics I (4).** A foundation course utilizing wheel-throwing and hand-building processes and glazing to form containers and sculpture in clay. Six hours studio per week.
- ART 267. Chinese Calligraphy (3).** A studio-based introduction to Chinese calligraphy. Includes the writing of calligraphy and study of historical and cultural background of Chinese characters.
- ART 274. Typography (4).** Prerequisite, ART 170. History and application of typography as a tool for visual communication. Two hours lecture and two hours studio per week.
- ART 280. Sculpture I (4).** Studio experience in sculpture, with emphasis on conceptual development through forming with clay and wood. Includes moldmaking, assemblage of materials and reference to historical and contemporary sculpture. Six hours studio per week.
- ART 285. Printmaking I (4).** Prerequisites, ART 150, 170. Exploration of techniques and history of prints, with an emphasis on relief printmaking. Six hours of studio per week.
- ART 296. Individual Study (1-6).** May be repeated. Prerequisite, permission of instructor.
- ART 298. Special Topics (1-6).**
- ART 299. Seminar (1-5).** May be repeated.
- ART 300. Papermaking (4).** Hand papermaking techniques, exploring historical and contemporary works/methods. Watermarking, pigmentation, moldmaking, with emphasis on sheetforming and fiber preparation. May be repeated for credit.
- ART 324. History of Photography (4).** A survey of contemporary photographers, their ideas, and the influences of their work upon culture. Covers mid-twentieth century to the present. Completion of ART 225 is strongly recommended but not required.
- ART 325A. Photography II (4).** Prerequisite, ART 225. Topics change on a rotating basis. Fall: Photography as a medium of creative expression including color photography. Winter: An introduction to hand-applied emulsions, including cyanotype, Vandyke and gum printing. Spring: Introduction to digital still photography. Formerly ART 325.
- ART 325B. Photography II-Alternative Processes (4).** Prerequisite, ART 225. An intensive introduction to hand-applied emulsions such as cyanotype, albumen, and gum printing.
- ART 325C. Photography II-Digital Imaging (4).** Prerequisite, ART 225 and permission of instructor. An introduction to digital still photography and various output options including large format inkjet, photo output, and digital negatives for traditional and non-silver printing.
- ART 330. Art in the Elementary School (4).** Content and methodology for teaching art in the elementary school. (Enrollment is subject to full admission to the Teacher Education Program.)
- ART 341. Wood Design II (4).** Prerequisite, ART 241. Design and fabrication of furniture forms. Emphasis on creative form development utilizing advanced fabrication and finishing processes. Six hours studio per week.
- ART 346. Jewelry/Metals II (4).** Prerequisite, ART 246 and permission of instructor. Advanced instruction in conceptual and technical aspects of contemporary jewelry and metalwork. Emphasis on personal exploration of advanced techniques. Six hours studio per week. Formerly ART 447. May be repeated one time for credit.
- ART 350. Drawing III (4).** Prerequisites, ART 250. A continuation of ART 250 with increased emphasis on drawing as a major means of visual expression. Includes drawing from the figure. Six hours studio per week.
- ART 351. Illustration I (4).** Prerequisite, ART 250, ART 260 or ART 262. Introduction to a variety of media and techniques associated with illustration. Six hours studio per week. Formerly ART 251.
- ART 357. African and Oceanic Art (4).** A survey of the tribal arts of Africa and Oceania as represented by the cultures of Polynesia, Micronesia, Melanesia, and Australia from prehistoric times to the present. ART 357 and ART 557 are equivalent courses. Students may not receive credit for both.
- ART 360A. Painting II (4).** Continued study of technical and formal approaches to painting, with an emphasis on representational and narrative strategies. Formerly ART 261.
- ART 360B. Painting II (4).** Prerequisite, ART 260. Continued study of technical and formal approach to painting, with emphasis on visual abstraction. Six hours studio per week. Formerly ART 360.
- ART 360C. Painting IV (4).** Prerequisite, ART 360B, or permission of instructor. A continued study in the field as outlined in ART 360B. Six hours studio per week. Formerly ART 361.
- ART 362A. Watercolor II (4).** Prerequisite, ART 262 or permission of instructor. A continuation of ART 262 stressing a higher degree of individual expression and experimentation with various waterbased media. Six hours studio per week. Formerly ART 263.
- ART 362B. Watercolor III (4).** Prerequisite, ART 362A. A continuation of the technical and formal study of waterbased media with an emphasis on the development of individual expression. Six hours studio per week. Formerly ART 362.
- ART 362C. Watercolor IV (4).** Prerequisite, ART 362B. A continuation of the study outlined in ART 362B with emphasis upon developing individual direction. Six hours studio per week. Formerly ART 363.

- ART 364. Traditional Chinese Painting II (3).** A continuation of traditional Chinese painting with emphasis on fine line and spontaneous style painting using both traditional and contemporary techniques.
- ART 365A. Ceramics II-Advanced Handbuilding (4).** Prerequisite, ART 265. This course alternates quarterly with ART 365B. Advanced instruction in ceramic sculptural concepts and techniques including idea development, historical/contemporary influences, investigation of clay bodies and personal expression through sculptural form.
- ART 365B. Ceramics II-Wheel Throwing (4).** Prerequisite, ART 265. This course alternates quarterly with ART 365A. An exploration of the potter's wheel as a tool for personal expression through vessel forms. Emphasis on utilitarian ceramics, vessel design and historical/contemporary influences.
- ART 370. Layout and Design I (5).** Prerequisite, permission of instructor. (See requirements for admission to graphic design major) Two-dimensional design, introduction to type, design and composition concepts. Two hours lecture and four hours studio per week.
- ART 371. Layout and Design II (5).** Prerequisites, ART 370, permission of instructor. Advanced work in design composition with emphasis on applications of letter forms and color. Two hours lecture and four hours studio per week.
- ART 372. Design and Production I (5).** Prerequisites, ART 371, permission of instructor. Emphasis on advertising art and production techniques. Two hours lecture and four hours studio per week.
- ART 374. History of Graphic Design (4).** A historical survey of the graphic arts from their beginning to the present.
- ART 380A. Sculpture II (4).** Prerequisite, ART 280. Emphasis on conceptual development through fabrication in wood, surface embellishment, basic construction and related forming techniques in a variety of materials. Six hours studio per week.
- ART 380B. Sculpture III (4).** Prerequisite, ART 380A. A concentrated study in any of the sculpture media, giving increased attention to concepts and aesthetic quality. Six hours studio per week. Formerly ART 380.
- ART 381. Mixed-Media Art (3).** Prerequisites, ART 260, ART 280. The integration of two and three-dimensional media into mixed-media art forms. May be repeated for credit.
- ART 384. Computer Art I (4).** Prerequisite, ART 260 or 262 and permission of instructor. Use of computer systems as tools for creative expression. Six hours studio per week.
- ART 389. Contemporary Concepts in Art (4).** Exploration of the contextual, formal, and philosophic meanings of current art movements and theories as regards their relevance and place in contemporary art practice.
- ART 398. Special Topics (1-6).**
- ART 410. Art of the Italian Renaissance (4).** Prerequisite, ART 236. The painting, sculpture and architecture of the Italian Renaissance from the late middle ages through the sixteenth century.
- ART 414. Recent Art (4).** Prerequisite, ART 237. The visual arts of the last 25 years, including the traditional forms of painting, sculpture and architecture, and newer forms including video, computer, and performance art. Formerly ART 314. Students may not receive credit for both.
- ART 415. Painters and Printmakers of Northern Europe (4).** Art of Germany, Flanders and Holland, 15th-18th century.
- ART 425. Photography III (4).** Prerequisites, ART 325 and permission of instructor. A continuation of study outlined in ART 325 with emphasis upon developing individual direction. Six hours studio per week. May be repeated for credit.
- ART 430. Components of Art Education (4).** Prerequisite, ART 330. Content and strategies for teaching aesthetics, art criticism, art history, and art production in art education; writing, implementing, and assessing quality art lessons.
- ART 432. Art in Secondary School (4).** Prerequisite, ART 430. Current philosophies and curriculum in the secondary school; objectives, planning, methods of teaching and evaluation.
- ART 441. Wood Design III (4).** Prerequisite, ART 341. Advanced design and fabrication of furniture forms. Emphasis on research and development of furniture forms utilizing advanced and/or innovative fabrication and finishing processes. Six hours studio per week. May be repeated for credit.
- ART 446. Jewelry/Metals III (4).** Permission of instructor and two quarters of ART 346. Advanced exploration of personal expression in metals, with emphasis on self-direction and on conceptual and technical mastery. May be repeated for credit.
- ART 449. Principles of Color (4).** Prerequisite, two art studio courses. The technical, historic and aesthetic dimensions of pigment and light colors including an examination of major color theories.
- ART 450. Drawing IV (4).** Prerequisite, ART 350 and permission of instructor. Advanced study and experimentation with technical, formal and conceptual problems in drawing. Includes drawing from the figure. Six studio hours per week. May be repeated for credit by undergraduates only.
- ART 451. Illustration II (4).** Prerequisite, ART 351. A continuation of ART 351 stressing development of personal expression in illustration. Six hours studio per week. May be repeated for credit by undergraduates only.
- ART 453. Art in the United States (4).** Sculpture, painting and architecture from Colonial period to the present, with emphasis on the period 1900-1945. Foreign influences are identified and traced to their assimilation. ART 453 and ART 553 are equivalent courses. Students may not receive credit for both.
- ART 456. History of Eastern Art (4).** Prerequisite, permission of the instructor. A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan. ART 456 and ART 556 are equivalent courses. Students may not receive credit for both.
- ART 460. Painting V (4).** Prerequisites, ART 360C, ART 450, permission of instructor. Advanced study and experimentation in technical, formal and conceptual approaches to painting, with an emphasis on developing individual expression. Six hours studio per week. May be repeated for credit.
- ART 465. Ceramics III (4).** Prerequisites, permission of instructor and ART 365A or B. A continued exploration of ceramic materials and processes. Emphasis on developing professional practices and personal vocabulary through the ceramic medium.
- ART 470. Advertising Graphic Design (4).** Prerequisite, permission of instructor. Concept and design of advertising problems. Presentation and communication skills; introduction to analysis and implementation of marketing strategies. May be repeated for credit. One hour lecture and four hours studio per week.
- ART 471. Corporate Graphic Design (4).** Prerequisites, ART 470, permission of instructor. Principles of corporate concept and design: advanced presentation and communication skills; analysis and implementation of marketing strategies in the corporate setting. One hour lecture and four hours studio per week. May be repeated for credit.
- ART 472. Design and Production II (4).** Prerequisite, ART 471. Continues the development of professional attitudes; promotes creative problem solving techniques; defines the role of designer or art director and relationships to typographer and printer. One hour lecture and four hours studio per week. May be repeated for credit.
- ART 480. Sculpture IV (4).** Prerequisite, ART 380B. Research and experimentation with new materials in sculpture. Six hours studio per week. May be repeated for credit.
- ART 482. Travel Study (2-8).** Conducted tour in this country and abroad as a means of studying art. Students registering for credit

will be required to do reading on the area to be visited before making the tour, to participate in study session during the tour, and to submit a report for evaluation at the end of the trip. The amount of credit to be granted will be determined by the college at the time the tour is approved, but it must not exceed 1-1/2 credits per week of planned travel study.

ART 484. Computer Art II (4). Prerequisite, ART 384 and permission of instructor. Exploration of the creative potential of several software programs and imaging procedures used in the creation of electronic art. Two hours lecture and two hours studio per week. May be repeated for credit.

ART 489. Art and Gender Theory (4). Examines constructions of masculinity and femininity within the canon of western art. Also explores how contemporary artists and historians are subverting these constructions.

ART 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

ART 491. Workshop (1-6). Individual and group study of specific or general problems in art education, including laboratory experience, lectures and demonstrations. The credit to be earned determined upon scheduling.

ART 495. Studio Project (1). Preparation of a professional portfolio and presentation of a body of work suitable for exhibition. Satisfies end of major assessment requirement. Must be taken during one of the last two quarters prior to graduation. Grade will be S or U.

ART 496. Individual Study (1-2). Prerequisite, permission of instructor. May be repeated.

- A. Computer Art
- C. Ceramics
- D. Drawing
- E. Art Education (1-4)
- G. Graphic Design
- H. Art History
- J. Jewelry and Metalsmithing
- P. Painting
- T. Photography
- S. Sculpture
- W. Wood Design

ART 498. Special Topics (1-6).

ART 499. Seminar (1-5). May be repeated.

**Undergraduate Courses/
Programs on Reserve**

The following programs and courses are on

reserve and may be offered subject to program needs: Fine Woodworking; ART 277. Lettering (3); ART 287 Intaglio Printmaking (3); ART 354. Art of China (4); ART 385. Serigraphy (3); ART 455. Art of Japan (4); ART 485 Advanced Serigraphy (3); ART 486. Advanced Collagraphy (3); ART 496. Individual Study (1-2) R: Printmaking.

**ASIA/PACIFIC
STUDIES**

Program Director: Jeffrey W. Dippmann
Philosophy
LL 337C

Program Faculty
John Alwin, Geography
James Cook, History
Jeffrey Dippmann, Philosophy & Religion
Michael Launius, Political Science
Chenyang Li, Philosophy & Religion
Liuxi Meng, Chinese Language
Joshua Nelson, Japanese Language
Penglin Wang, Anthropology
Hong Xiao, Sociology
Bang-Soon Yoon, Political Science & Women Studies

General Program Information

Asia/Pacific Studies is an interdisciplinary program focusing on a region currently undergoing a dramatic economic, political and social transformation. The program is intended to provide students with a grasp of the region's diversity while also emphasizing the interactive nature of an overarching community of nations. Careers in international business, government service, and education all can be augmented by preparations in Asia/Pacific Studies. The program may also serve as an excellent preparation for graduate study in various academic and professional fields.

Bachelor of Arts

Asia/Pacific Studies Major (1556)

Asia/Pacific Studies Core	Credits
AST 102, Introduction to Asian Studies.....	3
HIST 383, East Asian Civilization (5) OR HIST 380, Modern East Asia.....	5
GEOG 475, Geography of Asia.....	5
POSC 366, Government and Politics of East Asia.....	5
JAPN 151 - 153, First Year Japanese 251-253, Second Year Japanese OR	
CHIN 151-153, First Year Chinese 251-253, Second Year Chinese.....	30

Asia/Pacific Core Total 48

Electives 15

Elective credits may be selected from the following with the approval of the student's program advisor.

- ART 455, Art of Japan (4)
- ANTH 344, Cultures of Asia (4)
- AST 301, Chinese Literature in Translation (4)
- AST 347, Japanese Literature in Translation (4)
- GEOG 474, Geography of China (4)
- HIST 482, Revolutionary China (3)
- HIST 483, Modern China (5)
- HIST 484, Modern Japan (5)
- PHIL 445, Chinese Philosophy (5)
- POSC 367, Politics of Japan (5)
- POSC 368, Chinese Politics (5)
- POSC 369, Korean Politics (5)
- POSC 373, International Politics of the Pacific Rim (5)
- RELS 351, Religions of Asia (5)

Total 63

Asia/Pacific Studies Minor

Required Courses	Credits
AST 102, Introduction to Asian Studies.....	3
GEOG 475, Geography of Asia OR HIST 383, East Asian Civilization.....	5
	Subtotal 8

Select one of the following emphases:

Japanese Studies (1554)
JAPN 151, 152, 153 (or higher) 15
Select from the following: 10

- ART 455, Art of Japan (4)
- HIST 484, Modern Japan (3-5)
- POSC 367, Politics of Japan (5)*
- AST 301, Chinese Literature in Translation (4)
- AST 310, Japan Today (3)
- AST 347, Japanese Literature in Translation (4)

Chinese Studies (1553)
CHIN 151, 152, 153 (or higher) 15
Select from the following: 10

- AST 301, Chinese Literature in Translation (4)
- GEOG 474, Geography of China (4)
- HIST 482, Revolutionary China (3)
- HIST 483, Modern China (5)
- PHIL 445, Chinese Philosophy (5)
- POSC 368, Chinese Politics (5)*

Asian Studies (1551)
Chinese, Japanese, or another language with Director's approval (e.g. Korean, Russian)..... 15

Select from the following: 10-14
 ANTH 344, Cultures of Asia (4)
 GEOG 475, Geography of Asia (5) OR
 HIST 380, Modern East Asia (5)
 POSC 366, Government and Politics of East
 Asia (5)*
 POSC 373, International Politics of the
 Pacific Rim (5)*
 POSC 369, Korean Politics (5)*
 RELS 351, Religions of Asia (5)

Total 33-37

*Elective courses may not be chosen from the student's major area.

Other courses may be included with advisor's approval. At least two departments must be represented among selected courses.

Asia/Pacific Studies Courses

- AST 102. **Introduction to Asian Studies** (3). An interdisciplinary introduction to the study of Asia; emphasizing geography, history, culture and economics.
- AST 301. **Chinese Literature in Translation** (4). Prerequisite, grade of C- or better in English 101. A survey of Chinese literature in translation. AST 301 and CHIN 301 are equivalent courses. Students may not receive credit for both courses.
- AST 310. **Japan Today** (3). Study of culture, social structure, human relations, and issues and problems in contemporary Japan.
- AST 347. **Japanese Literature in Translation** (4). Prerequisite, C- or higher in English 101 or its equivalent. A survey of Japanese literature in translation. AST 347 and JAPN 301 are equivalent courses. Students may not receive credit for both courses.
- AST 396. **Individual Study** (1-6).
- AST 398. **Special Topics** (1-6).

BIOLOGICAL SCIENCES

Faculty

Chair: David M. Darda
 Science Building 338

Professors

- Glen W. Clark, Invertebrate Zoology and Parasitology (Emeritus)
- David M. Darda, Evolutionary Vertebrate Morphology, Herpetology
- Paul W. James, Ecology and Fisheries Biology
- Sheldon R. Johnson, Director Allied Health Sciences; Zoophysiology, Mammalogy
- Robert E. Pacha, Microbiology (Emeritus)

Stamford D. Smith, Entomology (Emeritus.)
 David L. Soltz, Ecology and Evolutionary Biology

Associate Professors

Daniel D. Beck, Physiological Ecology and Herpetology
 Kristina A. Ernest, Terrestrial and Community Ecology
 Holly C. Pinkart, Microbiology, Microbial Ecology
 Mary E. Poulson, Plant Physiology
 Linda A. Raubeson, Plant Systematics
 Lixing Sun, Behavioral Ecology and Evolution

Assistant Professors

Patrick J. Bryan, Invertebrate Zoology, Developmental Biology
 Tom R. Cottrell, Plant Ecology
 Philip W. Mattocks, Ornithology and Physiology
 Ian J. Quitadamo, Science Education, Biotechnology
 Steven D. Verhey, Cell and Molecular Biology
 R. Steven Wagner, Genetics
 Candace R. Winstead, Microbiology and Immunology

General Departmental Information

The Department of Biological Sciences provides the biological component of the liberal arts education at Central Washington University. We promote student understanding of biological concepts relevant to the individual and society, and foster an appreciation of scientific inquiry. Evolution is the unifying theme of our curriculum. Our students obtain a broad education, covering a wide variety of biological disciplines. We focus on the student; classes are small, facilitating hands-on experience, interactions with faculty, and opportunities for both undergraduate and graduate research. We offer a full complement of competitive pre-professional programs, strong programs in regional field biology, and a quality program for secondary biology educators.

Admission to Departmental Programs

In order to be admitted to a Biology major or minor, all students must:

1. Register with the Department and be advised by departmental faculty.
2. Complete CHEM 181 and 182 with labs (or equivalent) or be currently enrolled in the latter. (Exception may be made for Biology Teaching, see advisor.)
3. Complete BIOL 110, 111, 112 or equivalents.
4. Qualify for MATH 170.

In order to graduate, each student must have on file, in the Biology Department and in

Registrar Services, an official Course of Study. The Course of Study will be prepared by the student in conjunction with his or her advisor. It must be approved by the student, advisor, and the Department Chair and should be completed during the quarter in which the student is admitted to the major.

Bachelor of Arts

Biology Major (1600)

The Bachelor of Arts degree is designed to develop breadth in the sciences generally. Students completing the Bachelor of Arts major will find that their strong general background will allow them flexibility in career choices. The Bachelor of Arts degree meets the requirements for admission to most graduate schools and medical schools. Each student's program must be approved by the Department of Biological Sciences at least one academic year preceding graduation.

CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153. PHYS 111 has a prerequisite of high school algebra and trigonometry. PHYS 181 has a prerequisite or corequisite of MATH 172, 173 and 272.

Credits earned in CHEM 181 and 181LAB and PHYS 111 will be allowed in partial fulfillment of the natural science breadth requirements as well as the requirements of this major.

A maximum of 15 credits in BIOL 490 and BIOL 496 may be included in the major.

Required Courses

- | | |
|--|----------------|
| | Credits |
| BIOL 110, Basic Biology | 5 |
| BIOL 111, Plant Biology | 5 |
| BIOL 112, Animal Biology | 5 |
| BIOL 220, Introductory Cellular Biology. | 5 |
| BIOL 321, Genetics | 5 |
| BIOL 499S, Senior Seminar OR | |
| BIOL 497, Honors Thesis | 1-5 |
| CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB | |
| General Chemistry and Laboratory. | 15 |
| CHEM 361, 361LAB, 362, Organic Chemistry | |
| and Laboratory. | 8 |
| Select from the following sequences: | 15 |
| PHYS 111, 111LAB, 112, 112LAB, 113, | |
| 113LAB, Introductory Physics (15) | |
| PHYS 181, 181LAB, 182, 182LAB, 183, | |
| 183LAB, General Physics (15) | |

- Select from the following: 5-10
- BIOL 441, Plant Physiology (5)
 - BIOL 455, Zoophysiology (5)
 - BIOL 355 & 356, Human Anatomy & Physiology (10)
- Select from the following: 5
- BIOL 360, General Ecology (5)
 - BIOL 420, Environmental Microbiology (5)
 - BIOL 464, Terrestrial Plant Ecology (5)

Total 74-83

Bachelor of Science Biology Major (1600)

The Bachelor of Science major offers undergraduate students a degree program with depth of training in the biological sciences and supporting fields. This program prepares students for immediate entrance into careers in biological sciences or for graduate work (for preparation for teaching high school biology, see Biology Teaching Major). Students may choose a general B.S. degree (no specialization), or a specialization in one of three areas: Cell and Molecular Biology, Ecology, or Organismal Biology (these will be indicated on the student's transcripts). Students consult with the appropriate Biology advisor for approval of their B.S. program and electives, which must be submitted for approval to the Department of Biological Sciences at least one academic year preceding graduation. All students in the B.S. Biology major must complete all B.S. core requirements, plus additional specific requirements if they choose a specialization. A maximum of 15 credits in BIOL 490 and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153.

Core Requirements	Credits
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5
BIOL 220, Introductory Cellular Biology	5
BIOL 321, Genetics	5
BIOL 360, General Ecology (5) OR	
BIOL 420, Environmental	
Microbiology (5)	5
BIOL 441, Plant Physiology (5) OR	
BIOL 455, Zoophysiology (5)	5
BIOL 470, Mechanisms of Evolution	3
BIOL 499S, Senior Seminar OR	
BIOL 497, Honors Thesis	1-5
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB	
General Chemistry and Laboratory	15
CHEM 361, 361LAB, 362, Organic Chemistry	
and laboratory	8
MATH 311, Statistical Concepts (5) OR	
PSY 362, Introductory Statistics (4)	4-5

Core Total 66-67

Organismal diversity requirement: All students in the Biology B.S. program must take at least one advanced (300- or 400-level) animal course, one advanced plant course, and one advanced course covering other organisms (fungi, protists, bacteria, viruses). These courses may be contained within the Core or taken as electives. See department for list of approved courses in each category.

B.S. Biology-General Biology (no specialization) (1610)

This general degree offers students the

flexibility to choose a broad range of courses within biology or to tailor course requirements to specific interests. Electives must be approved by a Biology advisor.

Required Courses	Credits
B.S. Core Requirements	66-67
General Biology Electives	33-34

Total 100

Bachelor of Science Biology Cell and Molecular Biology Specialization (1611)

Cell and Molecular Biology is the study of what cells are, how they are put together, what makes them work, what makes them differ from each other, how they associate and interact, and what goes wrong in disease states. The study of cell and molecular biology facilitates understanding of a wide variety of disciplines including genetics, developmental biology, microbiology, immunology and physiology. The emphasis is in Cell and Molecular Biology (CMB) is designed for students with interests in the cellular and molecular basics of life and the application of molecular techniques to medical, technological and environmental issues. The goal of the CMB specialization is to prepare graduates to be competitive in applications for entry into graduate degree programs, professional programs, or technical/industrial jobs. A full year of physics (PHYS 111/112/113 + labs or PHYS 181/182/183 + labs) is recommended for students interested in cell and molecular biology.

Students interested in microbiology are eligible to become registered microbiologists (National Registry of Microbiologists, American Academy of Microbiology) upon completing the following requirements:

1. A minimum of a baccalaureate degree in Biological Science with 30 quarter credits in microbiology courses.
2. Acceptable experience equivalent to one year of full-time work in a microbiology laboratory related to the specialty area in which certification is sought. Experience must be gained within the immediate past three years. Certification as a conditional registrant is offered to individuals who possess the academic qualifications for registered microbiologist, but who lack the required year of full-time laboratory experience.

Required Courses	Credits
Biology Core	66-67
BIOL 323, Microbiology	5
BIOL 425, Molecular Biotechnology	5
CHEM 431 and CHEM 431LAB,	
Biochemistry I	5
Cell and Molecular Biology Electives	18-19

Total 100

Bachelor of Science Biology Ecology Specialization (1608)

Ecology is the study of how organisms interact with their physical and biological environment. The Ecology specialization is designed for students interested in basic and applied ecology, including fisheries, wildlife management, forestry, ecological restoration, and conservation biology. Students following this specialization will gain experience in natural history, field research, and experimental design. Potential careers may be found in federal, state and tribal agencies, or private environmental consulting firms. The Ecology faculty strongly suggest that every student augment the single required taxonomy course with an elective second taxonomy course. Students interested in graduate study in ecology should work closely with their advisor to tailor this specialization to their particular field of interest.

Required Courses	Credits
Biology Core	66-67

Select one of the following advanced ecology courses:	5
BIOL 461, Community Ecology (5)	
BIOL 462, Wildlife and Fisheries Ecology (5)	
BIOL 463, Limnology (5)	
BIOL 464, Terrestrial Plant Ecology (5)	
BIOL 466, Conservation Biology (5)	
Select one of the following taxonomy courses:	4-5
BIOL 341, Plant Taxonomy (5)	
BIOL 350, Invertebrate Zoology (5)	
BIOL 351, Entomology (5)	
BIOL 443, Mycology (5)	
BIOL 444, Algology (5)	
BIOL 445, Mushrooms and Puffballs (5)	
BIOL 450, Ichthyology (4)	
BIOL 451, Herpetology (4)	
BIOL 452, Ornithology (4)	
BIOL 453, Mammalogy (5)	
BIOL 493, Field, Techniques	5
MATH 170, Intuitive Calculus	5
Ecology Electives	13-15

Total 100

Bachelor of Science Biology Organismal Biology Specialization (1612)

The Organismal Biology Specialization allows a student to explore the structure (morphology), function (physiology), development, behavior, and taxonomic diversity of animals, plants, fungi, and/or microbes. A student looking for a traditional Zoology or Botany program will be well served by this specialization. The Organismal specialization is a good choice for students preparing for graduate study in organismal biology or planning for a career in the health professions, forensics, or state or federal

agency work, and it can complement other programs such as teaching, biological anthropology, and psychology.

Required Courses	Credits
Biology Core.....	66-67
Select two of the following structural/functional courses:	10-11
BIOL 343, Plant Anatomy (5)	
BIOL 353, Comparative Vertebrate Anatomy (6)	
BIOL 354, Embryology/Developmental Biology (5)	
BIOL 442, Comparative Morphology of Vascular Plants (5)	
BIOL 454, Histology (5)	
Select one of the following taxonomy courses	4-5
BIOL 341, Plant Taxonomy (5)	
BIOL 350, Invertebrate Zoology (5)	
BIOL 351, Entomology (5)	
BIOL 444, Algae (5)	
BIOL 445, Mushrooms and Puffballs (5)	
BIOL 450, Ichthyology (4)	
BIOL 451, Herpetology (4)	
BIOL 452, Ornithology (4)	
BIOL 453, Mammalogy (5)	
Organismal Biology Electives	17-20
Total	100

Bachelor of Science Biology Teaching Major (1602)

This major satisfies the criteria for an endorsement in Biology. This major qualifies students to teach biology at the high school level and the middle or junior high school levels. Students should seriously consider working toward endorsement in a second area such as chemistry, earth science, general science, physics, or mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Curriculum and Supervision Department. Students completing this program after August 31, 2005 will be required to pass the WEST-E (PRAXIS II) exam for biology to receive a Biology endorsement.

Required Courses	Credits
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5
BIOL 220, Introductory Cellular Biology.....	5
BIOL 321, Genetics	5
BIOL 322, Introductory Microbiology	5
OR BIOL 323, Microbiology (5)	
BIOL 360, General Ecology	5
BIOL 427, Biotechnology for Teachers.....	5
BIOL 300, Introduction to Evolution (5)....	3-5
OR BIOL 470, Mechanisms of Evolution (3)	
BIOL 441, Plant Physiology (5).....	5-10
OR BIOL 355 & 356, Human Anatomy and Physiology (5, 5)	
OR BIOL 455, Zoophysiology (5)	

BIOL 492, Laboratory Experience in Teaching Biological Sciences	2
BIOL 499S, Senior Seminar	1
SCED 324, Science Education in the Secondary Schools	4
SCED 495, Science Education Research.....	1
Select from the following sequence:	15-23
CHEM 111, 111LAB, 112, 112LAB, 113, 113LAB, Introduction to Biochemistry/Lab (15)	
OR	
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB General Chemistry/Lab (15) AND	
CHEM 361, 361LAB, 362, Organic Chemistry (8)	
Total	71-86

Biology Minor (1600)

Required Courses	Credits
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5
BIOL 220, Introductory Cellular Biology.....	5
Electives in Biological Sciences.....	13
Total	33

Biology: Teaching Elementary Minor (1603)

Required Courses	Credits
BIOL 101, Fundamentals of Biology (5) OR	
BIOL 110, Basic Biology (5).....	5
BIOL 111, Plant Biology OR	
BIOL 200, Plants in the Modern World: ..	5
BIOL 112, Animal Biology OR	
BIOL 201, Human Physiology	5
BIOL 360, General Ecology OR	
BIOL 300, Introduction to Evolution.....	5
SCED 322, Science Education in the Elementary Schools.....	3
Total	23

Biology: Teaching Secondary Minor (1604)

This minor is restricted to students working on a teaching major in chemistry, earth science, or physics. Students taking this minor will receive an endorsement in Biology only upon passing the WEST-E (PRAXIS II) exam for biology. SCED 324 requires admission to the Teacher Preparation Program.

Required Courses	Credits
BIOL 110, Basic Biology OR	
BIOL 101, Fundamentals of Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5
BIOL 220, Introductory Cellular Biology.....	5
BIOL 321, Genetics	5
BIOL 323, Microbiology	5

BIOL 360, General Ecology	5
BIOL 492, Laboratory Experience in Teaching Biological Sciences	2
SCED 324, Science Education in the Secondary Schools.....	4
Total	41

Botany Minor (1700)

Not available to biology majors

Required Courses	Credits
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology.....	5
BIOL 220, Introductory Cellular Biology.....	5
Electives in BIOL.....	8
Total	23

Zoology Minor (8700)

Not available to biology majors

Required Courses	Credits
BIOL 110, Basic Biology	5
BIOL 112, Animal Biology.....	5
BIOL 220, Introductory Cellular Biology.....	5
Electives in BIOL.....	8
Total	23

Allied Health Sciences Course

AHSC 301. Introduction to Medical Technology (2). Prerequisites, 5 credit hours in biology and 5 credit hours in chemistry and permission of instructor. Introduction to laboratory procedures and theory of urinalysis, clinical chemistry, hematology, blood banking and coagulation. One hour lecture and two hours laboratory per week.

Biological Sciences Courses

BIOL 101. Fundamentals of Biology (5). Biology in the modern world. Four hours lecture and one two-hour laboratory per week. May not be counted toward a major or minor in the Department of Biological Sciences. Formerly BISC 104. Students may not receive credit for both.

BIOL 110. Basic Biology (5). An introduction to the concepts and processes which are common to most life forms. All biology majors and minors must take this course before enrolling in other courses in the major or minor. Four hours lecture and two hours laboratory per week. Formerly BISC 110. Students may not receive credit for both.

BIOL 111. Plant Biology (5). Prerequisite, BIOL 110. Four hours lecture and one two-hour laboratory per week. Formerly BISC 111. Students may not receive credit for both.

BIOL 112. Animal Biology (5). Prerequisite, BIOL 110. Four hours lecture and two hours laboratory per week. Formerly BISC 112. Students may not receive credit for both.

- BIOL 200. Plants In the Modern World (5).** Plants and their significance in the world today. Three hours lecture and three hours laboratory per week. (Not open to majors in the biological sciences.) May not be counted toward a major or minor in the Department of Biological Sciences. Formerly BOT 211. Students may not receive credit for both.
- BIOL 201. Human Physiology (5).** Organ systems of humans. Not open to students with credit in BIOL 455; may not be counted toward a major or minor in the Department of Biological Sciences. Formerly ZOOL 270. Students may not receive credit for both.
- BIOL 220. Introductory Cellular Biology (5).** Prerequisites, BIOL 110, and either CHEM 113 or CHEM 183. Concepts, processes and structures involved in understanding life at the cellular level. Four hours lecture and two hours of laboratory per week. Formerly BISC 223, 313. Student may not receive credit for more than one.
- BIOL 298. Special Topics (1-6).** Formerly BISC 298.
- BIOL 300. Introduction to Evolution (5).** The evidence, theories, and mechanisms of the evolution of life, including man. May not be counted toward a major in the Department of Biological Sciences. Formerly BISC 385. Students may not receive credit for both.
- BIOL 302. Human Ecology (5).** Basic concepts of ecology with emphasis on ecosystems and populations and how human activities and attitudes relate to these basic concepts. This course may not be counted towards a major in the Department of Biological Sciences. Formerly BISC 302. Students may not receive credit for both.
- BIOL 304. Human Inheritance (5).** The study of human inheritance and related areas of biology. May not be counted toward a major in the Department of Biological Sciences. Formerly BISC 304. Students may not receive credit for both.
- BIOL 320. Cellular Biology (5).** Prerequisites, BIOL 220 and CHEM 361/361LAB. Advanced analysis of cellular processes. Five hours lecture per week. Formerly BISC 333. Students may not receive credit for both.
- BIOL 321. Genetics (5).** Prerequisite, BIOL 220. A lecture and laboratory course in the basic principles of heredity of plants and animals. Four hours lecture and two hours laboratory per week. Formerly BISC 365. Students may not receive credit for both.
- BIOL 322. Introductory Microbiology (5).** Prerequisite, BIOL 220. An introduction to the biology of the microorganisms with applications to medicine, food science, industry, and agriculture. This course is not intended for students who plan to take additional classes in microbiology. Four lectures and one two hour laboratory a week. Formerly BISC 369. Students may not receive credit for both.
- BIOL 323. Microbiology (5).** Prerequisites, BIOL 220 and either CHEM 113/113LAB or CHEM 182/182LAB. Principles of microbiological practice, including isolation, cultivation, morphological and physiological methods of analysis, and variability. Two hours lecture and six hours laboratory per week. Formerly BISC 370. Students may not receive credit for both.
- BIOL 341. Plant Taxonomy (5).** Prerequisite, BIOL 111 or BIOL 200 or permission. Classification of vascular plants, using local flora. Two hours lecture and six hours laboratory per week; the course includes field trips and individual field work. Formerly BOT 333. Students may not receive credit for both.
- BIOL 343. Plant Anatomy (5).** Prerequisite, BIOL 111. A treatment of the fundamental facts and aspects of vascular plant anatomy. Plant tissues with special reference to their development, organization, and biological significance. Three hours lecture and four hours laboratory per week. Formerly BOT 358. Students may not receive credit for both.
- BIOL 344. Dendrology (4).** Prerequisite, BIOL 111 or permission of instructor. A study of trees, their habits of growth, the characteristic forest areas of North America. Two hours lecture and four hours laboratory per week. A field course. Formerly BOT 365. Students may not receive credit for both.
- BIOL 350. Invertebrate Zoology (5).** Prerequisite, BIOL 112 or permission of instructor. Morphology, phylogeny, physiology, and embryology of the invertebrate phyla, exclusive of parasitic forms. Four hours lecture and two hours laboratory per week. Formerly ZOOL 361. Students may not receive credit for both.
- BIOL 351. General Entomology (5).** Insect biology, taxonomy, structure and relationships to man. Two hours lecture and six hours laboratory or field work per week. Formerly ZOOL 362. Students may not receive credit for both.
- BIOL 352. Parasitology (5).** Prerequisite, BIOL 112. Biological relations of animal parasite and host; structure, classification, and methods of diagnosis of parasitic protozoa, worms and arthropods. Two hours lecture and six hours laboratory per week. Formerly ZOOL 380. Students may not receive credit for both.
- BIOL 353. Comparative Vertebrate Anatomy (6).** Prerequisite, BIOL 112. Evolutionary, functional, and developmental aspects of vertebrate morphology. Three hours lecture and six hours laboratory per week. Formerly ZOOL 351. Students may not receive credit for both.
- BIOL 354. General Vertebrate Embryology (5).** Prerequisite, BIOL 112. Comparative development; fertilization, growth and differentiation, experimental morphogenesis, and establishment of the early organ systems. Two hours lecture and six hours laboratory per week. Formerly ZOOL 348. Students may not receive credit for both.
- BIOL 355. Human Anatomy and Physiology (5).** Prerequisite, permission of the instructor. The first quarter of a two-quarter study of the structure and function of the human body. Students should not take BIOL 355 unless they intend to take BIOL 356. Three hours lecture and four hours laboratory per week. Formerly ZOOL 341. Students may not get credit for both.
- BIOL 356. Human Anatomy and Physiology (5).** Prerequisite, BIOL 355 and permission of instructor. The second quarter of the two quarter study of the structure and function of the human body. Three hours lecture and four hours laboratory per week. Formerly ZOOL 342. Students may not get credit for both.
- BIOL 360. General Ecology (5).** Prerequisites, BIOL 110, 111 and 112 and MATH 153. Interrelationships of organisms with their environment. Three hours lecture and four hours laboratory/field work/discussion per week. A weekend field trip may be required. Formerly BISC 375. Students may not receive credit for both.
- BIOL 377. Regional Natural History (2).** Prerequisite, permission of instructor. Classroom study of the natural history of a selected region as preparation for one-to-two week field trip. Emphasis will be on developing background skills to undertake a field exploration over the quarter (winter, spring, summer) break. Subtitles will identify the selected geological region (e.g. Baja California Natural History). May be repeated for credit under a different subtitle (region). BIOL 377 and GEOL 377 are equivalent courses. Formerly BISC/BIOL 377.1. Students may not receive credit for more than one.
- BIOL 377LAB. Regional Natural History (3).** Prerequisite, BIOL 377 and permission of instructor. Special fees required. One-to-two week field trip to explore biological and physical patterns and processes in selected regions of North America. Emphasis will be on recording field observations, keeping a field journal, field study techniques, and performing investigations chosen and developed by student participants. Subtitles will identify the region studies. May be repeated for credit under a different subtitle. BIOL 377LAB and GEOL 377LAB are equivalent courses. Formerly BISC/BIOL 377.2.
- BIOL 398. Special Topics (1-6).**
- BIOL 420. Environmental Microbiology (5).** Prerequisites, BIOL 323 and CHEM 362. Ecology of microorganisms in marine, fresh-water and soil environments. Three hours lecture and four hours laboratory per week. Formerly BISC 411. Students may not receive credit for both.

- BIOL 421. General Virology (5).** Prerequisites, BIOL 323 and CHEM 362. BIOL 321 strongly recommended. Interrelationship between animal, plant, and bacterial viruses and their hosts, with emphasis on the animal viruses. Five hours lecture per week. Formerly BISC 413. Students may not receive credit for both.
- BIOL 422. Immunology (5).** Prerequisites, BIOL 323 and CHEM 361. Nature of the immune response, disease preventing and producing mechanisms and laboratory applications. Five hours lecture per week. Formerly BISC 414. Students may not receive credit for both.
- BIOL 423. Techniques in Immunology and Virology (5).** Prerequisite or corequisites, BIOL 420 or 422. A practical course in dealing with the routine techniques used in diagnostic and experimental immunology and virology. Three hours lecture and four hours laboratory per week. Formerly BISC 415. Students may not receive credit for both.
- BIOL 425. Molecular Biotechnology (5).** Prerequisite, BIOL 220. BIOL 322 or BIOL 323 recommended. The practice and theory of techniques used in molecular biology. Two hours lecture and six hours laboratory per week. Formerly BISC 423. Students may not receive credit for both.
- BIOL 426. Medical Microbiology (3).** Prerequisite, BIOL 323 or permission of instructor. An introduction to medical microbiology emphasizing the biology of pathogenic bacteria, their relation to infectious diseases and the isolation and identification of specific disease agents. Three lectures per week. Formerly BISC 445. Students may not receive credit for both.
- BIOL 426LAB. Medical Microbiology Laboratory (2).** Prerequisite, BIOL 323; prerequisite or corequisite, BIOL 426. Formerly BISC 445.1 and BIOL 426.1. Students may not receive credit for more than one.
- BIOL 427. Biotechnology for Teachers (5).** Prerequisites, BIOL 110, 111, 112, 220; also strongly recommended, BIOL 321. This course will help pre-service teachers develop the skills necessary to construct and perform biological experiments using contemporary biotechnology in the context of educational theory and application.
- BIOL 440. Plant Pathology (5).** Prerequisite, BIOL 111. Representative diseases of plants and the bacterial and fungal organisms which cause them. Two hours lecture and six hours laboratory per week. Formerly BOT 460. Students may not receive credit for both.
- BIOL 441. Plant Physiology (5).** Prerequisites, BIOL 111, BIOL 220, BIOL 320, CHEM 362, or permission. A critical study of the various physiological activities of plants, such as photosynthesis, respiration and responses to various stimuli. Three hours lecture and four hours laboratory per week. Formerly BOT 461. Students may not receive credit for both.
- BIOL 442. Comparative Morphology of Vascular Plants (5).** Prerequisite, 10 credits in Botany. Form, structure, and habits of the major groups of vascular plants. Three hours lecture and four hours laboratory per week. Formerly BOT 462. Students may not receive credit for both.
- BIOL 443. Mycology (5).** Prerequisite, BIOL 111 and BIOL 220. The biology, morphology, and economic importance of the major groups of fungi including the slime molds. Three hours lecture and four hours laboratory per week. Formerly BOT 463. Students may not receive credit for both.
- BIOL 444. Algology (5).** Prerequisites, BIOL 111 and BIOL 220. Taxonomy and ecology of fresh-water and marine algae. Three hours lecture and four hours laboratory per week. Formerly BOT 464. Students may not receive credit for both.
- BIOL 445. Mushrooms, Puffballs, and Related Forms (5).** Prerequisite, BIOL 111 or permission of instructor. Stresses taxonomy, morphology, and ecology of mushrooms and related forms with emphasis on Northwest flora. Offered fall quarter only. Formerly BOT 465. Students may not receive credit for both.
- BIOL 450. Ichthyology (4).** Prerequisite, BIOL 112. An introduction to the biology, taxonomy and distribution of modern fishes with special reference to the Pacific Northwest. Three hours lecture and two hours laboratory or field work per week. Formerly ZOO 412. Students may not receive credit for both.
- BIOL 451. Herpetology (4).** Prerequisite, BIOL 112. An introduction to biology, taxonomy and distribution of modern amphibians and reptiles with special reference to the Pacific Northwest. Two hours lecture and four hours laboratory or field studies per week. Formerly ZOO 411. Students may not receive credit for both.
- BIOL 452. Ornithology (4).** Prerequisite, BIOL 112. Study of birds with special emphasis on anatomic and behavioral adaptations. Three hours lecture and two hours laboratory or field study per week. Formerly ZOO 410. Students may not receive credit for both.
- BIOL 453. Mammalogy (5).** Prerequisite BIOL 112. Evolution, taxonomy and ecology of mammals with laboratory emphasis on Pacific Northwest mammals. Three hours lecture and four hours laboratory per week. Formerly ZOO 409. Students may not receive credit for both.
- BIOL 454. Histology (5).** Prerequisites, BIOL 112, BIOL 220 and either BIOL 353, BIOL 356 or BIOL 455. Systematic study, description and identification of microscopic structures of animal tissues. Three hours lecture and four hours laboratory per week. Formerly ZOO 471. Students may not receive credit for both.
- BIOL 455. Zoophysiology (5).** Prerequisites, BIOL 112, BIOL 220 or BIOL 320, CHEM 362, or permission. Vertebrate physiology; laboratory experience in physiological techniques. Three hours lecture and four hours laboratory per week. Formerly ZOO 472. Students may not receive credit for both.
- BIOL 456. Biology of Aging (3).** Prerequisite, BIOL 201 or BIOL 355, 356 or BIOL 455. Description and analysis of aging phenomena in humans and animal models. Three lectures per week. Formerly BISC 460. Students may not receive credit for both.
- BIOL 461. Community Ecology (3).** Prerequisite or corequisite, BIOL 360. Principles of the structure and function of ecological communities. Three hours lecture/ discussion per week. Formerly BISC 475. Students may not receive credit for both.
- BIOL 461LAB. Community Ecology Laboratory (2).** Corequisite, BIOL 461. Laboratory and field study of the structure and function of ecological communities. Four hours of laboratory/field work per week. Weekend field trips may be required. Formerly BISC 475.1 and BIOL 461.1. Students may not receive credit for more than one.
- BIOL 462. Wildlife and Fisheries Ecology (5).** Prerequisite, BIOL 360. Ecological principles of wildlife and fish populations and communities as they relate to management theory and practice in the Pacific Northwest. Three hours lecture/discussion and four hours laboratory/field work per week. Weekend field trips may be required. Formerly BISC 476. Students may not receive credit for both.
- BIOL 463. Limnology (5).** Prerequisites, CHEM 182 and BIOL 360 or permission of instructor. Chemical, physical and biological characteristics of inland waters. Three hours lecture and four hours laboratory per week. Formerly BISC 480. Students may not receive credit for both.
- BIOL 464. Terrestrial Plant Ecology (5).** Prerequisites, BIOL 111 and BIOL 360 or permission. The ecological relationships of plant species and plant communities. Three hours lecture and either four hours laboratory or a Saturday field trip per week. Formerly BOT 441. Students may not receive credit for both.
- BIOL 465. Biology of Animal Behavior (4).** Prerequisite BIOL 112 or permission of instructor. Three lectures and two hours of laboratory a week. Formerly ZOO 465. Students may not receive credit for both BIOL 465/ZOO 465 and BIOL 565.
- BIOL 466. Conservation Biology (5).** Prerequisite BIOL 360 or permission of instructor. An introduction to the theory and practice of conservation biology, with emphasis on case studies. Two hours lecture, one hour discussion, and 4 hours lab or field

study per week. Weekend field trips may be required. Formerly BISC 440. Students may not receive credit for BISC 440 or BIOL 466 and BIOL 566.

BIOL 470. Mechanisms of Evolution (3). Prerequisites, 15 credits of biology plus senior standing. Darwinian evolution and the modern synthesis. Formerly BISC 485. Students may not receive credit for both.

BIOL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly BISC 490.

BIOL 491. Workshop (1-6). Formerly BISC 491.

BIOL 492. Laboratory Experience in Teaching Biological Sciences (2). Prerequisite, 15 credit hours in college biology and permission of instructor. Experience in planning, managing and teaching in a laboratory setting. May be repeated once for full credit with permission of Chair. Formerly BISC 492.

BIOL 493. Biological Field Practicum (1-15). Prerequisite, permission of instructor. Individual or group off-campus experience in the field study of biological phenomena. This course may be taken more than once for full credit. Formerly BISC 493.

BIOL 496. Individual Study (1-6). Prerequisite, permission of instructor. Formerly BISC 496/BOT 496/ZOOL 496.

BIOL 497. Honors Thesis (1-5). Prerequisite, admission to departmental honors program. May be repeated for up to a total of six credits. This course may be substituted for BIOL 499S, Senior Seminar, in any Biology baccalaureate program. Formerly BISC 497/BOT 497/ZOOL 497.

BIOL 498. Special Topics (1-6). Formerly BISC 498.

BIOL 499. Seminar (1-5). May be repeated. Formerly BISC 499.

BIOL 499S. Senior Seminar (1). Prerequisite, senior standing. Biological sciences: reading, writing and speaking. Either this course or BIOL 497, Honors Thesis, is required in all baccalaureate programs of the Biology Department. Formerly BISC/BIOL 499.1.

Undergraduate Courses/Programs on Reserve

The following courses/programs are on reserve and may be offered subject to program needs: Allied Health Sciences Program; BIOL 424. Laboratory Immunology (1); BIOL 460. Introduction to Soils (5); BIOL 468. Biogeography (5).

BUSINESS ADMINISTRATION

<http://www.cwu.edu/~cob/bsad/>
Shaw-Smyser 329

Office of the Chair

Stephen B. Schepman, Ellensburg
Don R. Nixon, SeaTac
F. Lynn Richmond, Lynnwood

Professors

Bruce D. Bagamery, FIN (Lynnwood)
James P. Beaghan, MKT (SeaTac)
Wayne A. Fairburn, FIN (Ellensburg)
Gerald P. Gunn, BUS (Ellensburg)
Stanley Jacobs, FIN (SeaTac)
Eldon C. Johnson, FIN (Lynnwood)
James L. Nimnicht, HRM (Ellensburg)
Don R. Nixon, M&O (SeaTac)
Stephen B. Schepman, BUS (Ellensburg)
Hugh M. Spall, Law (Ellensburg)

Associate Professors

Peter J. Boyle, MKT (Lynnwood)
Michael Chang, MIS (Ellensburg)
C. Christopher Lee, MIS (SeaTac)
Gary M. Richardson, FIN (Ellensburg)
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Assistant Professors

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Graeme Coetzer, HRM (Lynnwood)
Ronald Elkins, OSC (Ellensburg)
Dennis G. Flynn, MKT and OSC (SeaTac)
Wanda H. Fujimoto, MKT (Ellensburg)
Nancy Graber-Pigeon, Law, HRM (Ellensburg)
Ruth Lapsley, M&O (Ellensburg)
John Montoya, HRM (Lynnwood, SeaTac)
Rex Moody, MKT (Ellensburg)
William H. Turnquist, MIS (Ellensburg)

Business Administration Program Educational Outcomes

The department has identified overall educational outcomes related to knowledge, values, and skills for all BSBA graduates. Following are the outcomes for the Bachelor of Science in Business Administration (BSBA) programs:

1. Knowledge-Based Educational Outcomes. Upon completion of the BSBA program, students should:
 - have a working knowledge in a set of analytical business tools related to: math, statistics, accounting, economics, and behavioral science.
 - apply business core concepts, principles and analytical skills across functional lines.
 - show competency in an area of

specialization. (Specializations include Finance, General Business, Human Resource Management, Management & Organization, Management Information Systems, Marketing Management, and Operations and Supply Chain Management.

- understand global, national, and regional business systems and environments.
2. Values-Based Educational Outcomes. Upon completion of the BSBA program, students should:
 - comprehend issues in ethical decision making and social responsibility.
 - understand diversity issues in the workplace and society.
 3. Skills-Based Educational Outcomes. Upon completion of the BSBA program., students should:
 - function effectively when in teams both as a leader and as a member.
 - demonstrate effective oral and written business communication skills.
 - use business computer application software and support decisions on problems in areas of specialization.
 - access, develop, and use information to analyze business problems and propose feasible solutions.

BSBA Program Overview

The department offers coursework leading to the Bachelor of Science in Business Administration (BSBA) degree. In addition to the University general education requirements, the BSBA major is comprised of three principal components: 1) pre-admission courses that provide foundation knowledge and skills needed for further study in business, 2) business core courses that build on the pre-admission group and focus on decision making in the main functional areas of business, and 3) specialization courses that allow for advanced study in one of the functional areas.

Specializations are available in seven areas: finance, general business, human resource management, management and organization, marketing management, operations and supply chain management and management information systems. All courses or specializations may not be available at all sites.

Transfer Credits and Prior Learning Assessment

Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements. Upper division (300-400 level) courses may also be transferred toward meeting the business core and specialization requirements, but only with the approval of the Department Chair and the College Dean or designee.

For individuals seeking academic credit for prior work experiences, a prior learning assessment program is available. Students

opting for this program must demonstrate competency in the course material by successfully completing a challenge exam. The following pre-admission and business core courses are eligible: BUS 241; BUS 221, OSC 323, MIS 386; MKT 360; FIN 370; MGT 380. The result of the challenge is recorded as "S" or "U" on the transcript and is not used in computing grade point average. See your business administration advisor or program director at your site for additional information.

Service to Other Majors

Students majoring outside of the College of Business who are required to take courses in this College for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in upper division courses.

BSBA Program Admission Requirements

Students must apply and be accepted into the major prior to beginning 300- or 400-level business coursework. At the time of application, the 35 credits of pre-admission coursework should be substantially completed. Application forms are available in the department offices. The completed form must be accompanied by transcripts that reflect all prior college work. Admission shall be based on grades earned in the following courses:

Pre-admission Requirements	Credits
ACCT 251, Accounting I	5
ACCT 252, Accounting II	5
BUS 241, Legal Environment of Business	5
BUS 221, Introductory Business Statistics	5
(Prerequisite, IT 101 and MATH 130)	
ECON 201, Principles of Economics, Micro	5
ECON 202, Principles of Economics, Macro	5
MATH 153, Pre-Calculus Mathematics I OR	
MATH 170, Intuitive Calculus OR	
MATH 172, Calculus	5

Pre-admission Total 35

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of "C-" (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The applicant must have completed ENG 101/102. These criteria apply to equivalent courses transferred from other institutions.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index. Students in a pre-major status who have not met all of the above requirements may enroll in a business core or specialization course only with permission of the College Dean or designee.

BSBA Major (1750)

Business Core Requirements	Credits
FIN 370, Introductory Financial Management	5
MGT 380, Organizational Management	5
MKT 360, Principles of Marketing	5
OSC 323, Operations Management	5
MIS 386, Management Info. Systems	5
MGT 489, Strategic Management	5
Business Core Total	30

Communication Requirement

Select from the following:	4-5
ADMG 385, Business Communication and Report Writing (5)	
COM 345, Business and Professional Speaking (4)	
ENG 310, Technical Writing (4)	

Specialization Requirements:	25
Select one of the following seven areas:	
Finance	
General Business	
Human Resource Management	
Management and Organization	
Management Information Systems	
Marketing Management	
Operations and Supply Chain Management	

Total 94-95

Additional BSBA Graduation Requirements

The following special rules apply to students seeking the BSBA major:

- Students must earn a minimum cumulative GPA of 2.25 in the 94-95 credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59-60 credit upper-division component of the in-the-major total.
- Students must complete a minimum of 90 quarter credits of non-business courses, which may include up to 13.5 quarter credits of economics and 9 quarter credits of business statistics (BUS 221, 321). For the purpose of this requirement, "non-business" courses include all EXCEPT FOR those with the prefix ACCT, BUS, ECON, FIN, HRM, MGT, MIS, MKT, or OSC.
- Transfer students must complete at least 40 CWU business credits to be eligible for the business administration degree.
- The BSBA program requires a single specialization of at least 25 credits. Occasionally a student requests a second specialization. To be eligible for a second specialization, a minimum of 20 unique credits must be completed. Unique in this sense means the credits have not been used as part of any other BSBA specialization.

BSBA with Finance Specialization (1751)

Advisors: Bagamery, Fairburn, Jacobs, E. Johnson, Lasik, G. Richardson

Finance builds on the business core and focuses on decision making in three interrelated areas: managerial finance, investments, and financial markets and institutions. The business core and finance specialization courses provide academic preparation for a wide variety of entry-level positions in managerial finance and the financial services industry.

Required Courses	Credits
ECON 330, Money and Banking	5
FIN 470, Intermediate Financial Management	5
FIN 475, Investments	5
Select a minimum of 10 credits from the following:	10
FIN 371, Personal Financial Planning (5)	
FIN 471, Case Problems in Managerial Finance (5)	
FIN 476, Advanced Investments (5)	
FIN 477, International Finance (5)	
FIN 478, Management of Financial Institutions (5)	
BUS 490, Cooperative Education (1-6)	
One other course approved in advance by a finance advisor (5)	

Finance Specialization Total 25

BSBA with General Business Specialization (1758)

Advisors: Bagamery, Beaghan, Boyle, Coetzer, Fairburn, Fujimoto, Graber-Pigeon, Gunn, Jacobs, Johnson, Lasik, Lapsley, Lee, Nimnicht, Nixon, Richmond, Spall, Turnquist and Schepman

This specialization is intended for the student who wishes to tailor a "unique" set of specialization courses to his or her needs or for the student who desires a broad-based "generalist" track within the Business Administration major. A minimum of 25 upper division elective credits is required and at least 20 credits must be Business (BUS), Finance (FIN), Human Resource Management (HRM), Management (MGT), Marketing (MKT), or Operations and Supply Chain Management (OSC) courses. The student is limited to ten credits from any one area and the specialization must include at least ten credits of 400-level courses.

The following courses are pre-approved for inclusion in this specialization:

Courses	Credits
BUS 490, Cooperative Education	1-6
BUS 496, Individual Study	1-6
FIN 371, Personal Financial Planning	5

FIN 470, Intermediate Financial Management	5
FIN 475, Investments	5
HRM 381, Management of Human Resources	5
HRM 442, Training and Developing	5
HRM 445, Organizational Staffing	5
MGT 384, Intro to International Business	5
MGT 481, Organizational Behavior	5
MGT 484, International Management	5
MKT 367, Consumer Behavior	5
MKT 467, International Marketing	5
MKT 469, Market Research	5
OSC 324, Quality and Continuous Improvement	5
OSC 435, Advanced Operations Management	5
OSC 464, Supply Chain Management	5

Other courses may be approved by an advisor

General Business Specialization Total 25

BSBA with Human Resource Management Specialization (1761)

Advisors: Coetzer, Graber-Pigeon, Lapsley, Montoya, Nimnicht, Nixon, and Richmond

Students pursuing the HR specialization will deal with fundamental organizational processes that must be developed and managed for continuous improvement by both HR specialists and by all managers in general. Thus, the study of HR takes on a dual emphasis. First, by pursuing an HR specialization, students will be thoroughly trained to focus decision-making as it pertains to the acquisition, utilization, development and retention of employees. Alternatively, the study of HR is also applicable as a strong supplement to other specializations or majors.

Required Courses	Credits
HRM 381, Management of Human Resources	5
HRM 486, Problems in Human Resource Management	5
Select from the following:	15
HRM 442, Training and Development	(5)
HRM 445, Organizational Staffing	(5)
HRM 479, Industrial Relations/Collective Bargaining	(5)
HRM 488, Compensation Policy and Administration	(5)
BUS 490, Cooperative Education (1-6)	
ECON 355, Economics of Labor	(5)
MGT 481, Organizational Behavior	(5)
OSC 435, Advanced Operations Management	(5)

Human Resource Management Total 25

BSBA with Management and Organization Specialization (1765)

Advisors: Bradley, Cant, Lapsley, Nimnicht, Nixon, Richmond and Schepman

The Management and Organization specialization reflects the diverse activities required to productively utilize the organization's resources. The overall focus of this specialization will be on how to effectively coordinate people, technology, and structure in order to reach organizational objectives. Studies include both the theory and practice of management as preparation for leadership in public and private organizations.

Required Courses	Credits
MGT 481, Organizational Behavior	5
MGT 484, International Management	5
Select from the following:	15
MGT 383, Contemporary Management Practices	(5)
MGT 384, Introduction to International Business	(5)
MGT 385, Organizational Theory	(5)
MGT 389, Business and Society	(5)
MGT 482, Applied Management & Organizational Behavior	(5)
MGT 483, Organizational Change	(5)
MGT 487, Small Business Management	(5)
BUS 490, Cooperative Education (1-6)	
HRM 381, Management of Human Resources	(5)
OSC 435, Advanced Operations Management	(5)
ECON 452, Managerial Economics	(5)

Management and Organization Total 25

BSBA with Management Information Systems Specialization (1740)

Advisors: Bayazit, Chang Lee

Management Information Systems (MIS) plays an important role in business by bridging the gap between business decision makers and technical staff. The MIS curriculum prepares students for a variety of entry-level positions in the following areas: systems analysis, database administration, web development, network administration, management consulting, and project management. Students will apply information systems techniques to produce the information that organizations increasingly require, to analyze and design information systems for business decision-making, and to develop and operate data and communication processing systems in organizations. Students will be able to explain the crucial role of computing, information systems and technology in integrating various entities throughout the business process as well as the supply chain. Students will be able to demonstrate necessary computing and analytical skills in order to solve problems in business.

Required Courses	Credits
MIS 387, Systems Analysis & Design in Business	5
MIS 420, Database Systems in Business	5
MIS 450, Systems implementation in Business	5
Select from the following:	10
MIS 400, MIS Laboratory Assistant (2-6)	
MIS 430, Business Data Communications	(5)
MIS 440, E-Business and Information Systems	(5)
BUS 490, Cooperative Education (1-6) OR One other course approved in advance by Advisor (4-5)	

MIS Specialization Total 25

BSBA with Marketing Management Specialization (1756)

Advisors: Beaghan, Boyle, Cleaver Sellick, Flynn, Fujimoto, Moody

The marketing curriculum provides background for careers in sales, advertising, marketing management, research and analysis, and retail management. Marketing topics include researching and analyzing consumers, market demand, pricing, product distribution and development, and communication in order to develop marketing strategies and policies.

Required Courses	Credits
MKT 367, Consumer Behavior	5
MKT 469, Marketing Research	5
MKT 470, Marketing Problems and Policy	5
Select a minimum of 10 credits from the following:	10
MKT 361, Channels of Distribution Management	(5)
MKT 462, Marketing Promotion Management	(5)
MKT 463, Sales Force Management	(5)
MKT 465, Direct Marketing	(5)
MKT 466, Industrial Marketing	(5)
MKT 467, International Marketing	(5)
MKT 475, New Product Development	(5)
BUS 490, Cooperative Education (1-6)	
ME 467, Retail Management	(4)
ECON 310, International Economics	(5)

Marketing Management Total 25

BSBA with Operations and Supply Chain Management Specialization (OSC) (1745)

Advisors: Bayazit, Elkins, Flynn, Lee, Nixon, Trimble, and Turnquist

Operations and Supply Chain Management (OSC) builds on the business core and prepares students for careers as analysts, decision makers, and managers in any and all segments of the organization's supply,

production, and distribution chain. Students who complete this program will have a fundamental understanding of the systematic, integrated nature of the creation and delivery of goods and services, and the manner in which the supply, production and distribution chain includes or involves other internal and external entities. Students will be able to solve problems and make decisions in this environment by using concepts from accounting, economics and other business administration areas, computing and analytical skills, and appropriate quantitative and qualitative models.

Required Courses	Credits
OSC 435, Advanced Operations Management	5
OSC 464, Supply Chain Management	5
OSC 475, Global Supply Chain Management	5
OSC 480, Problems and Policy in Operations and SCM	5
Minimum of 5 credits from the following ...	5
OSC 324, Quality and Continuous Improvement (5)	
ACCT 305, Cost Accounting (5)	
BUS 490, Cooperative Education (1-6)	
ECON 452, Managerial Economics (5) OR	
One other course approved in advance by OSC advisor (5)	

Operations and SCM Total 25

Business Administration Minor (1750)

Advisors: Cant, Fairburn, Fujimoto, Gunn, Lapsley, Lasik, Nimmicht, Nixon, Richmond, Schepman, and Turnquist

The Business Administration minor provides students the opportunity to select business administration and supporting accounting and economics courses to meet individual educational needs. Students are admitted into the program when the completed minor application form is approved by a Business Administration minor advisor. Forms are available in the department offices. Students must earn a cumulative grade point average of 2.25 in courses allowed in fulfilling the Business Administration minor requirements.

Required Courses	Credits
ECON 201, Principles of Economics Micro ..	5
ACCT 301, Financial Accounting Analysis ...	5
Select a minimum of 20 credits from the following:	20
Courses with a prefix of BUS, FIN, HRM, MGT, MIS, or OSC. At least 15 of the 20 credits must be upper division	

Business Administration Minor Total 30

Suitable elective courses for the Business Administration minor may come from any of the functional areas of Business Administration. Appropriate course selections must be made and pre-approved by one of the Business Administration minor advisors. Advisors make every effort to help tailor the minor to best serve the needs of the individual student.

Supply Chain Management Certificate Program

Advisors: Elkins, Flynn, Nixon, Richmond, Trimble, and Turnquist

The certificate program provides the opportunity for the student to gain knowledge and skills in the full spectrum of supply chain activities—supplier relationships, purchasing management, operations and inventory management, logistics and transportation, quality management, and information technology. Typical job titles include: Purchasing/Supply Manager, Procurement Manager, Materials Manager, Contracts Manager, Purchasing Agent, Senior Buyer, and Buyer/Planner.

Required Courses	Credits
MIS 386, Management Information Systems	5
OSC 435, Advanced Operations Management	5
OSC 464, Supply Chain Management	5
OSC 475, Global Supply Chain Management	5
Select a minimum of 5 credits from:	5
BUS 490, Cooperative Education (5-6)	
ENG 310, Technical Writing (4)	
MGT 384, Intro to International Business (5)	
BUS 321, Intermediate Business Statistics (5)	
OSC 324, Quality and Continuous Improvement (5)	

Certificate Program Total 25

This program is open to matriculating students who meet the course prerequisites. The courses in the certificate program may be used as part of the B.S. Business Administration program. A cumulative GPA of 3.0 must be earned in the program to be eligible for the certificate.

Business Courses

- BUS 221. Introductory Business Statistics (5).** Prerequisites, IT 101 and MATH 130 or equivalents. Introduction to inferential business statistics. Using probability distributions and information from samples for business decisions. Formerly MS 221 and OMIS 221. Students may not receive credit for more than one.
- BUS 241. Legal Environment of Business (5).** Prerequisite, sophomore standing. An

introduction to legal reasoning, ethics in business, the law of contracts, torts, agency, sales, bailments, and personal property. Formerly FIN 241. Students may not receive credit for both.

- BUS 298. Special Topics (1-6).**
- BUS 321. Intermediate Business Statistics (5).** Prerequisite, BUS 221. Sampling techniques, the design of experiments, analysis of variance, linear regression and correlation, and time series analysis. Formerly MS 321 and OMIS 321. Students may not receive credit for more than one.
- BUS 341. Advanced Business Law (5).** Prerequisite, BUS 241. The law of negotiable instruments, suretyship, business structures including partnerships and corporations, trusts and estates, bankruptcy and government regulations of business. Formerly FIN 341. Students may not receive credit for both.
- BUS 374. Personal Investments (5).** Prerequisite, IT 101 or ability to use computer spreadsheets. Introduction to investment goals, strategies and securities, including certificates of deposit, money market instruments, stocks, bonds, and mutual funds. Additional topics introduced are risk analysis, taxes, and portfolio basics. Does not count for credit in the Finance specialization.
- BUS 396. Individual Study (1-6).** Prerequisite, permission of instructor.
- BUS 398. Special Topics (1-6).**
- BUS 400. Understanding the Private Enterprise System (2).** An intensive course covering U.S. and Washington state economics; small business and large corporations; business, labor, government, and the public; and the future of business in the Pacific Northwest. Restricted to professional educators participating in Business Week. Grade will be S or U. Formerly MGT 400. Students may not receive credit for both.
- BUS 452. Real Estate Finance and Investment (3).** Prerequisites, permission. Appraising techniques, investment decisions and sources and methods of financing real property. Formerly FIN 472 and BUS 472. Students may not receive credit for more than one.
- BUS 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. Grade will be S or U.
- BUS 495. Directed Research (1-5).** Prerequisite, permission of instructor. May be repeated. Grade will be S or U.

BUS 496. Individual Study (1-6). Prerequisite, permission of instructor.

BUS 498. Special Topics (1-6).

BUS 499. Seminar (1-5).

Undergraduate Courses/ Programs on Reserve

The following courses and programs are on reserve and may be offered subject to program needs: BUS 344. Real Estate Law (3); BUS 352. Principles of Real Estate (5); BUS 357. Risk and Insurance (5); BUS 515. Organization and Environment (5).

Finance Courses

FIN 370. Introductory Financial Management (5). Prerequisite, admission to the major or permission. An introduction to financial decision-making. Topics include time value of money, security valuation, capital budgeting, cost of capital, financial forecasting, financial statement analysis, and working capital management. Formerly BUS 370. Students may not receive credit for both.

FIN 371. Personal Financial Planning (5). Prerequisite, FIN 370 or permission. Introduction to full range of financial planning decisions, including: budgeting, investing, tax planning, risk management, employee benefits, retirement, and estate planning.

FIN 470. Intermediate Financial Management (5). Prerequisite, FIN 370. A review, consolidation, and extension of the FIN 370 class. Additional focus on the theory, practice, and analysis of the firm's investing and financing activities as these activities relate to the value creation process. Formerly BUS 470. Students may not receive credit for both.

FIN 471. Case Problems in Managerial Finance (5). Prerequisite, FIN 470. A capstone course in business financial management. Case analysis directed to the major financial decision-making areas of the firm. Computer assisted analysis using popular business software. Formerly BUS 471. Students may not receive credit for both.

FIN 475. Investments (5). Prerequisite, FIN 370. Principles of investment valuation. Topics include a survey of securities and securities markets, analysis of risk, expected return, timing, and selection of stocks and bonds in a portfolio context. Formerly BUS 475. Students may not receive credit for both.

FIN 476. Advanced Investments (5). Prerequisite, FIN 475. Portfolio theory, construction, and administration. Cases may be used to analyze key investment decisions and to relate theories and concepts to real-world situations. Formerly BUS 476. Students may not receive credit for both.

FIN 477. International Finance (5). Prerequisite, FIN 370. Financial decision

making in an international setting. Explores both traditional areas of finance and recent innovations in financial management from the perspective of the multinational corporation. Formerly BUS 477. Students may not receive credit for both.

FIN 478. Management of Financial Institutions (5). Prerequisites, FIN 370 and ECON 330. Asset-liability management process; investment and financing activities of banks, savings and loans, and credit unions. Formerly BUS 478. Students may not receive credit for both.

Human Resource Management Courses

HRM 381. Management of Human Resources (5). Selection of personnel, methods of training and retraining workers, wage policy, utilization of human resources, job training, administration of labor contracts, and public relations. Formerly IR 381, BUS 381, and MGT 381. Students may not receive credit for more than one.

HRM 442. Training and Development (5). Prerequisite, HRM 381. Application of training and development concepts and techniques used in assessing training requirements, planning and budgeting training programs, developing and facilitating training, and evaluating results.

HRM 445. Organizational Staffing (5). Prerequisite, HRM 381. Applied and conceptual analysis of employee recruitment, selection, placement, retention, and career development.

HRM 479. Industrial Relations/Collective Bargaining (5). Prerequisite, HRM 381 or permission. Statutory and case law governing labor relations. Contracts and negotiations. Impasse procedures. Arbitration cases and grievance procedures. Contemporary issues and cases. Formerly IR 479, BUS 479, and MGT 479. Students may not receive credit for more than one.

HRM 486. Problems in Human Resource Management (5). Prerequisite, HRM 381 plus two HRM electives, or permission of instructor. Analysis and research on selected topics involving contemporary issues in personnel management. This is the capstone course for the HRM specialization. Formerly IR 486, BUS 486, and MGT 486. Students may not receive credit for more than one.

HRM 488. Compensation Policy and Administration (5). Prerequisite, HRM 381. Employee compensation policy and administration is studied on a broad perspective encompassing direct financial payments, employer benefits, and nonfinancial rewards. Formerly IR 488, BUS 488, and MGT 488. Students may not receive credit for more than one.

Management Courses

MGT 380. Organizational Management (5). Prerequisite, admission to the major or permission. History of management thought and practice, its development, change and probable future; relationship of management and decisions to environment and society; organization theory; human behavioral aspects of management; planning, controlling, and staffing as decision processes in organizational systems. Formerly BUS 380. Students may not receive credit for both.

MGT 383. Contemporary Management Practices (5). Prerequisite, MGT 380 or permission of instructor. Exposure to and experience with contemporary management techniques and practices. Conceptual foundations are examined through case work, applied field activities and team projects. Formerly MGT 389.1 and BUS 383. Students may not receive credit for more than one.

MGT 384. Introduction to International Business (5). Prerequisite, ECON 310 or permission of instructor. Principles underlying international business; national policies influencing world trade and finance; and regional and international institutions. Formerly BUS 384. Students may not receive credit for both.

MGT 385. Organizational Theory (5). Prerequisite, MGT 380 or permission. An examination of the socio-technical system in a task oriented organization focusing on the total organization as the unit of analysis; technology, structure, work design and environment as determinants of effectiveness. Formerly BUS 385. Students may not receive credit for both.

MGT 388. Women in Management (3). An examination of the ways in which American sex roles, together with corporate cultural practices and organizational structures, affect women's attainment of and performance in managerial roles within business, educational, and professional organizations. Formerly SOC 368, MGT 368, and BUS 388. MGT 388 and SOC 388 are equivalent courses. Students may not receive credit for more than one.

MGT 389. Business and Society (5). Relations between business enterprise and society. Ethics and social responsibility in increasingly complex economic, political, social and technological environments. Formerly BUS 389. Students may not receive credit for both.

MGT 481. Organizational Behavior (5). Prerequisite, MGT 380. Applied and conceptual analysis of behavior within organizations. Involves leadership, motivation, communications, group processes, decision making, climate and culture. Formerly BUS 481. Students may not receive credit for both.

MGT 482. Applied Management and Organizational Behavior (5). Prerequisites, MGT 380 and MGT 481 or permission. Application of training and development practices to the

personal and professional growth of the human resource. Individual and small group exercises give students the opportunity to apply and experience a variety of management concepts and practices. Formerly BUS 482. Students may not receive credit for both.

MGT 483. Organizational Change (5). Prerequisites, MGT 380 and MGT 481 or permission. Managing problem solving and change in organizations. An integration and application of theories adapted to organizational behavior. Formerly BUS 483. Students may not receive credit for both.

MGT 484. International Management (5). The capstone course for the Management and Organization Specialization. A comparative study of management in selected countries as well as an analysis of key managerial problems encountered in the multinational corporation.

MGT 487. Small Business Management (5). Prerequisite, completion of all core requirements for business administration or accounting except MGT 489. Investigation of small business management and policy issues. Student-consulting teams develop solutions to small business problems in marketing, finance, production, and management. Formerly MGT 471 and BUS 487. Students may not receive credit for more than one.

MGT 489. Strategic Management (5). Prerequisite, completion of all other core requirements for business administration or accounting. Basic policy decisions involved in managing the total enterprise. Formerly BUS 489. Students may not receive credit for both.

Management Information System

MIS 386. Management Information Systems (5). Prerequisite, IT 101 or equivalent, and admission to the major or permission of instructor. Use of computer-based information systems in all functional areas of business. Computer and information technology, resources, management and end-user decision making, and system development. Formerly MS 386, OMIS 386 and BUS 386. Students may not receive credit for more than one.

MIS 387. Systems Analysis, Design, and Implementation (5). Prerequisite, MIS 386 or permission of instructor. Methods and techniques for the design, development and implementation of computer-based information systems for management and end-users. Emphasizes the integrated nature of modern systems. Formerly MS 387, OMIS 387 and BUS 387. Students may not receive credit for more than one.

MIS 400. MIS Laboratory Assistant (2). Prerequisite, MIS 386, software installation, technical support, and software training for students & Faculty in a computer lab. MIS teaching and/or research assistant. May be

repeated to a maximum total of 6 credits.

MIS 420. Database Systems in Business (5). Prerequisite, MIS 387 or permission of instructor. Database management systems theories. Logical data modeling and physical database design and implementation for business process improvement and effective business decision-making. Structured query language. Formerly OMIS 420. Students may not receive credit for more than one.

MIS 430. Business Data Communications (5). Prerequisite, MIS 386 or permission of instructor. Optimizing data communications systems for effective business decision-making. Planning, design, and management of networks and operating systems for enterprise-wide computing.

MIS 440. E-Business and Information Systems (5). Prerequisite, MIS 387 or permission of instructor. E-Business concepts, E-Business models and E-Business strategies. E-Business information systems development technologies.

MIS 450. Systems Implementation in Business (5). Prerequisites, MIS 420 and CS 111 or permission of instructor. A capstone course in MIS emphasizing systems implementation and maintenance. Emerging technologies in creating enterprise computer applications for business decision-making.

Marketing Courses

MKT 360. Principles of Marketing (5). Prerequisite, admission to the major or permission. Introduction to the development of a marketing system. Interaction of economics, law, politics, ethics, and the behavioral sciences in a mixed market society. Formerly BUS 360. Students may not receive credit for both.

MKT 361. Channels of Distribution Management (5). Prerequisite, MKT 360. Selection, evaluation, management and control of channels of distribution. Analysis of the channel system includes warehousing, inventory management, and physical distribution in consumer and industrial products and services. Formerly BUS 361. Students may not receive credit for both.

MKT 367. Consumer Behavior (5). Prerequisite, MKT 360 or permission. An introduction to analysis of the consumer as a basis for marketing decisions. The analysis concerns who buys what, how the consumer uses the product, the significance of the product to the consumer, and the buying process. Formerly BUS 367. Students may not receive credit for both.

MKT 398. Special Topics (1-6).

MKT 461. Self-Marketing (2). Prerequisite, MKT 360. Applying the principles of marketing to the development of a personal marketing plan including strategies and tactics. Formerly BUS 461. Students may not receive credit for both.

MKT 462. Marketing Promotion Management (5). Prerequisite, MKT 360. Communication problems of marketing goods and services to consumers and industrial buyers; advertising management, personal selling, and sales promotion; analysis for the promotion mix; and public interest in marketing communication. Formerly BUS 462. Students may not receive credit for both.

MKT 463. Sales Force Management (5). Prerequisite, MKT 360 or permission. Integration of sales force into the total marketing program of the firm; emphasizes organization, coordination, recruiting, training and incentives; develops methods for analyzing market demand and evaluation of sales force performance. Formerly BUS 463. Students may not receive credit for both.

MKT 465. Direct Marketing (5). Prerequisite, MKT 360. Primary and adjunct means of promotion and distribution through direct marketing. Formerly BUS 465. Students may not receive credit for both.

MKT 466. Industrial Marketing (5). Prerequisite, MKT 360. An introduction to industrial marketing and its major differences from consumer marketing. Major topics stressed are derived demand, industrial buyer behavior and planning of strategies and variations in the marketing mix. Case study method will be stressed. Formerly BUS 466. Students may not receive credit for both.

MKT 467. International Marketing (5). Prerequisite, MKT 360. Marketing functions involved in doing business overseas, environmental conditions affecting overseas trade and problems of securing employment overseas. Formerly BUS 467. Students may not receive credit for both.

MKT 469. Market Research (5). Prerequisites, BUS 221 and MKT 360 or permission. Application of research to economic and business problems; tools of research design; planning investigations; gathering, organizing, and interpreting data; and presentation of findings. (Not open to students with credit in ECON 426.) Formerly BUS 469. Students may not receive credit for both.

MKT 470. Marketing Problems and Policy (5). Prerequisites, MKT 367, MKT 469 plus two marketing electives and senior standing; by permission only. The capstone course for the marketing specialty. Uses case analysis and other techniques to develop marketing decision skills and policy determination abilities. Formerly MKT 468 and BUS 468. Students may not receive credit for more than one.

MKT 475. New Product Development (5). Prerequisite, MKT 360. Recommended, MKT 469. State-of-the-art management techniques to identify markets, develop new product ideas, measure customer benefits, and design profitable new products.

Operations and Supply Management Courses

OSC 323. Operations Management (5). Prerequisites, BUS 221, and admission to the major, or permission of instructor. For Business Administration majors, BUS 321 is strongly recommended. Introduction to the production/operations management function. Quantitative and qualitative methods and models to support decision making in production, operations, logistics, and other functional areas. Formerly MS 323 and BUS 323, OMIS 323. Students may not receive credit for more than one.

OSC 324. Quality and Continuous Improvement (5). Prerequisite, OSC 323 or permission of instructor. Development and deployment of quality management and continuous improvement practices. Qualitative, analytical, and statistical methods which integrate managerial, technical, behavioral, and economic perspectives. Formerly MS 324, OMIS 324 and BUS 324. Students may not receive credit for more than one.

OSC 435. Advanced Operations Management (5). Prerequisites, OSC 323 and MIS 386 or permission of instructor. Advanced methods and models for planning, management and decision making in the supply, operations and logistics chain. Emphasizes the integration and coordination of resources for productivity improvement. Formerly MGT 435, OMIS 435, and BUS 435. Students may not receive credit for more than one.

OSC 450. Logistics Management (5). Prerequisite, BUS 221, Introductory Business Statistics. Applications for competitive corporate strategies, adapting to change, demand management and performance measurements. Demand forecasting, collaborative planning, inventory forecasting and replenishment.

OSC 464. Supply Chain Management (5). Prerequisite, OSC 323 or permission of instructor. An introduction to the elements of purchasing activities in industrial, commercial, and governmental markets. Analytical, legal, and ethical implications of purchasing decision making. Formerly MKT 464, BUS 464 and OMIS 464. Students may not receive credit for more than one.

OSC 475. Global Supply Chain Management (5). Prerequisite, OSC 464 or permission of instructor. Global negotiating and purchasing including locating, selecting and managing foreign suppliers, negotiating the purchase of foreign and domestic goods or services and arranging for their shipment. Formerly OMIS 475. Students may not receive credit for more than one.

OSC 480. Problems and Policies in OSC (5). Prerequisites OSC 464 and OSC 435 or permission of instructor. The capstone course for the OSC specialization. Students will complete a comprehensive project, which

applies skills learned in other OSC classes to solve business problems and develop appropriate policies. Formerly OMIS 480. Students may not receive credit for more than one.

Undergraduate Courses/Programs on Reserve

The following courses and programs are on reserve and may be offered subject to program needs. **Programs:** Industrial Relations Specialization, Real Estate Specialization, Industrial Relations Minor.

CHEMISTRY

Faculty
Chair: Carin Thomas
SCI 302 G

Professors
David G. Lygre, Biochemistry
JoAnn P. DeLuca, Organic, Mechanistic

Associate Professors
Martha J. Kurtz, Chemistry Education
Carin Thomas, Biochemistry

Assistant Professors
Anthony Diaz, Inorganic, Solid State
Levente Fabry-Asztalos, Organic
Anne Johansen, Environmental, Analytical
Eric Bullock, Physical

General Departmental Information

Chemistry is the study of matter, its properties, and the changes it undergoes. The Department offers three majors. In each major, courses in the first two years emphasize fundamental topics in chemistry, mathematics, and physics. Students then choose advanced courses in chemistry and related areas to complete the requirements in their major.

These majors provide opportunities for practical experience in chemistry. For example, students are encouraged to take CHEM 490, Cooperative Education, in which they work in a private or public laboratory facility off campus. Students also are encouraged to do research on campus with a faculty member, and to participate in the Department's seminar program.

A minor in Chemistry is offered to supplement career related fields.

Note: In order to graduate, all chemistry majors are required to achieve at least a 2.00 cumulative GPA and a 2.25 GPA in courses required for the major.

Bachelor of Arts

Chemistry Major (1850)

The Bachelor of Arts major is designed to provide breadth, with an emphasis on Chemistry, that provides maximum flexibility in career choices. For example, students with this major may pursue careers in the health sciences, industry, environmental sciences, and other related areas.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 251, 251LAB, Quantitative Analysis	5
CHEM 361, 361LAB, 362, Organic Chemistry WITH CHEM 363, 363LAB, Organic Chemistry OR CHEM 431, 431LAB, Biochemistry OR CHEM 452, 452LAB, Instrumental Analysis	13
CHEM 381, 382, 382LAB, Physical Chemistry	10
CHEM 388, Colloquium	1
CHEM 488, Colloquium	1
One of the following not selected above:	3-5
CHEM 345, Environmental Chemistry (5)	
CHEM 350, Inorganic Chemistry (3)	
CHEM 431, 431LAB, Biochemistry (5)	
CHEM 383, 383LAB, Physical Chemistry (5)	
CHEM 452, 452LAB, Instrumental Analysis (5)	
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics	15
MATH 172, 173, Calculus	10

Total 73-75

Chemistry: Teaching Major (1851)

This major satisfies the criteria for an endorsement in Chemistry. This major qualifies students to teach chemistry at the high school level and the middle and junior high school level. Students should seriously consider working toward endorsement in a second area, such as biology, general science, earth science, physics, or mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Curriculum and Supervision Department. Students completing this program after August 31, 2005 will be required to pass the WEST-E (PRAXIS II) exam for chemistry to receive a chemistry endorsement.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 251, 251LAB, Quantitative Analysis OR CHEM 345, Environmental Chemistry	5

CHEM 350, Inorganic Chemistry	3
CHEM 361, 361LAB, 362, Organic Chemistry	8
CHEM 381, Physical Chemistry	5
CHEM 431, 431LAB, Biochemistry	5
CHEM 488, Colloquium	1
CHEM 492, Laboratory Experience in Teaching Chemistry	2
SCED 324, Science Education in the Secondary Schools	4
CHEM 495, Senior Research OR SCED 495, Research, OR	
CHEM 496, Individual Study	1
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB	
Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics	15
MATH 172, 173, Calculus	10

Total 74

Bachelor Of Science Chemistry Major (1850)

The Bachelor of Science major is designed for students who plan a career in chemistry or related fields. The program prepares students for further study in graduate programs, or to enter the workplace directly.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 251, 251LAB, Quantitative Analysis	5
CHEM 350, Inorganic Chemistry	3
CHEM 361, 361LAB, 362, 363, 363LAB, Organic Chemistry	13
CHEM 381, 382, 382LAB, 383, 383LAB, Physical Chemistry	15
CHEM 388, Colloquium	1
CHEM 431, 431LAB, Biochemistry	5
CHEM 452, 452LAB, Instrumental Analysis	5
CHEM 488, Colloquium	1
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB	
Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB 183, 183LAB, General Physics	15
MATH 172, 173, Calculus	10
Department-approved electives	12

Total 100

Biochemistry Specialization (1852)

This specialization is designed for students who plan a career in biochemistry or a related health science area such as medicine or dentistry. Majors may pursue further graduate studies, a career in biotechnology or a related industry.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 251, 251LAB, Quantitative Analysis	5
CHEM 361, 361LAB, 362, 363, 363LAB, Organic Chemistry	13
CHEM 381, 382, 382LAB, Physical Chemistry	10

CHEM 388, Colloquium	1
CHEM 431, 431LAB, 432, Biochemistry	8
CHEM 488, Colloquium	1
Select one of the following:	3-5
CHEM 350, Inorganic Chemistry (3)	
CHEM 383, 383LAB Physical Chemistry (5)	
CHEM 452, 452LAB, Instrumental Analysis (5)	
BIOL 220, Introductory Cellular Biology OR	
BIOL 320, Cellular Biology	5
BIOL 321, Genetics	5
BIOL 323, Microbiology	5
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB, Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics	15
MATH 172, 173, Calculus	10

Total 96-98

Chemistry Minor (1850)

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
Department-approved upper division electives in Chemistry	16

Total 31

Chemistry: Teaching Minor (1851)

This minor is restricted to students working on a teaching major in biology, earth science or physics. Students taking this minor will receive an endorsement in chemistry only upon passing the WEST-E (PRAXIS II) exam for chemistry. SCED 324 requires admission to the Teacher Education Program.

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 251, 251LAB, Quantitative Analysis OR CHEM 345, Environmental Chemistry	5
CHEM 361, 361LAB, 362, Organic Chemistry	8
CHEM 492, Laboratory Experience in Teaching Chemistry	2
SCED 324, Science Education in the Secondary Schools	4

Total 34

Chemistry Courses

- CHEM 101. Contemporary Chemistry (5).** Chemical principles and their application to contemporary problems of human beings and their environment. Four lectures and one laboratory session weekly.
- CHEM 105. Processes in Physical Science Chemistry (5).** An introductory course stressing the development of chemical concepts through class discussions, labs, and investigative activities. Recommended for students planning to teach in the elementary school (K-6).
- CHEM 111. Introduction to Chemistry (4).** Principles of chemistry for health science

students and for those needing a background in chemistry prior to taking CHEM 181. Not open to students with credits in CHEM 181 or higher.

CHEM 111LAB. Chemistry Laboratory (1). Pre or co-requisite, CHEM 111. One laboratory session weekly. Formerly CHEM 111.1.

CHEM 112. Introduction to Organic Chemistry (4). Prerequisite, CHEM 111. A survey of organic chemical principles and reactions.

CHEM 112LAB. Chemistry Laboratory (1). Prerequisite, CHEM 111LAB prerequisite or corequisite, CHEM 112. One laboratory session weekly. Formerly CHEM 112.1.

CHEM 113. Introduction to Biochemistry (4). Prerequisite, CHEM 112. A survey of biochemical principles.

CHEM 113LAB. Chemistry Laboratory (1). Prerequisite, CHEM 112LAB, prerequisite or corequisite CHEM 113. One laboratory session weekly. Formerly CHEM 113.1.

CHEM 181. General Chemistry (4). Prerequisites, strongly recommend high school chemistry and qualification for MATH 153 or math placement exam.

CHEM 181LAB. General Chemistry Laboratory (1). Pre or corequisite, CHEM 181. One laboratory session weekly. Formerly CHEM 181.1.

CHEM 182. General Chemistry (4). Prerequisite, CHEM 181.

CHEM 182LAB. General Chemistry Laboratory (1). Prerequisite, CHEM 181LAB, pre or corequisite, CHEM 182. One laboratory session weekly. Formerly 182.1.

CHEM 183. General Chemistry (4). Prerequisite, CHEM 182. Four lectures weekly.

CHEM 183LAB. General Chemistry Laboratory (1). Prerequisite, CHEM 182LAB, pre or corequisite, CHEM 183. One laboratory session weekly. Formerly CHEM 183.1.

CHEM 251. Quantitative Analysis (3). Prerequisite, CHEM 183, CHEM 183LAB pre or co-requisite, CHEM 251LAB.

CHEM 251LAB. Quantitative Analysis Laboratory (2). Pre or corequisite, CHEM 251. Two laboratory sessions weekly. Formerly CHEM 251.1.

CHEM 295. Research (1-6). By permission only.

CHEM 296. Individual Study (1-6). By permission only.

CHEM 298. Special Topics (1-6).

CHEM 345. Environmental Chemistry (5). Prerequisite, CHEM 183. Introduction to aquatic, atmospheric, and soil chemistry. Chemical analysis of substances in natural and contaminated systems. Three lectures and two laboratory sessions weekly.

CHEM 350. Inorganic Chemistry (3). Prerequisites, CHEM 183 and PHYS 113 or PHYS 183.

CHEM 361. Organic Chemistry (3). Pre- or corequisites, CHEM 183 and 183LAB.

CHEM 361LAB. Organic Chemistry Laboratory (2). Pre or corequisite, CHEM 361. Two laboratory sessions weekly. Formerly CHEM 361.1.

CHEM 362. Organic Chemistry (3). Prerequisite, CHEM 361.

CHEM 363. Organic Chemistry (3). Prerequisites, CHEM 362 and CHEM 361LAB.

CHEM 363LAB. Qualitative Organic Chemistry Laboratory (2). Prerequisite, CHEM 361LAB. Pre or corequisite, CHEM 363. Two laboratory sessions weekly. Formerly CHEM 363.1.

CHEM 381. Physical Chemistry (Thermodynamics) (5). Prerequisites, CHEM 183 and 183LAB, PHYS 113/113LAB or PHYS 183/183LAB and MATH 173. PHYS 183, 183LAB and MATH 273 recommended.

CHEM 382 Physical Chemistry (3). Prerequisite, CHEM 381.

CHEM 382LAB. Physical Chemistry Laboratory (2). Prerequisite or corequisite, CHEM 382. Six hours of laboratory weekly. Formerly CHEM 382.1.

CHEM 383. Physical Chemistry (3). Prerequisite, CHEM 381.

CHEM 383LAB. Physical Chemistry Laboratory (2). Prerequisite, CHEM 382LAB, pre or corequisite, CHEM 383. Six hours of laboratory weekly. Formerly CHEM 383.1.

CHEM 388. Colloquium (1). Prerequisite, 25 credits of chemistry. Analysis and presentation of the chemistry literature on a specific topic.

CHEM 395. Research (1-6). By permission only.

CHEM 431. Biochemistry (3). Prerequisite, CHEM 362. Formerly CHEM 371. Students may not receive credit for both.

CHEM 431LAB. Biochemistry Laboratory (2). Prerequisites, CHEM 361LAB, pre or corequisite CHEM 431. Two laboratory sessions weekly. Formerly CHEM 371.1 and CHEM 431.1.

CHEM 432. Biochemistry (3). Prerequisite, CHEM 431. Formerly CHEM 372. Students may not receive credit for both.

CHEM 452. Instrumental Analysis (3). Prerequisites, CHEM 251, 251LAB.

CHEM 452LAB. Instrumental Analysis Laboratory (2). Pre or corequisite, CHEM 452. Two laboratory sessions weekly. Formerly CHEM 452.1.

CHEM 454. Spectroscopy (3). Prerequisites, CHEM 363, 363LAB and 383 or permission. One lecture and two laboratory sessions weekly.

CHEM 473. Transition Metal Chemistry (4). Prerequisites, CHEM 350 and CHEM 382. A survey of the structure, spectroscopy, synthesis and characterization of transition

metal compounds. Three lectures and one lab weekly.

CHEM 488. Colloquium (1). Prerequisite, CHEM 388. Analysis and presentation of the chemistry literature on a specific topic. May be repeated.

CHEM 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

CHEM 491. Workshop (1-6).

CHEM 492. Laboratory Experience in Teaching Chemistry (2). Prerequisite, 10-15 credit hours in college chemistry and permission of the instructor. May be repeated for credit with permission of the Department Chair. Grade will be S or U.

CHEM 495. Senior Research (1-6). By permission only.

CHEM 496. Individual Study (1-6). By permission only.

CHEM 498. Special Topics (1-6).

CHEM 499. Seminar (1-5). Students do literature research of a chemical topic and make a presentation to the Department. May be repeated once for credit.

COMMUNICATION

Faculty

Chair: Corwin P. King
Bouillon 232

Professors:

Philip M. Backlund, Communication Studies
Corwin P. King, Communication Studies,
Public Relations
Jeryllyn S. McIntyre, Mass Communication
Studies

Associate Professors:

Lois J. Breedlove, Journalism
Beatrice Coleman, Public Relations
Robert C. Fordan, Journalism
Michael R. Ogden, Journalism

Assistant Professors:

Cynthia Mitchell, Journalism

General Departmental Information

Communication is a social science discipline that focuses upon how, why, and with what effects people use language to convey information. It is among the oldest and the newest fields of study, with historical roots going back to the Greeks and Romans, and

other ancient cultures, and with modern roots grounded in the latest developments in science and technology. It provides academic preparation for employment in the media, business and industry, government, education, and social and community service, as well as for advanced work in communication or such fields as law and ministry.

Majors are offered in Communication Studies, Public Relations, and Journalism. The Journalism major acquaints students with the structures, functions, and work methods of the media in preparation for careers in print, broadcast, and on-line media utilizing oral, visual and written communication. The Public Relations major combines the study of oral, visual, and written communication to prepare students for careers in the professional practice of public relations and advertising with corporations, agencies, and non-profit organizations. The Communication Studies major gives students the knowledge and skills necessary for effective communication in interpersonal, small group, and public situations, and is designed to prepare a student for graduate school as well as a variety of career opportunities.

Minors are available in several areas. They are a strong addition to majors in other fields, since there are few occupations where the ability to communicate well is not important.

Admission to Departmental Programs

1. Students pursuing either majors or minors are required to be advised by the departmental faculty.
2. Students must be enrolled in or have completed COM 201, 207, 208, and 289 before obtaining entrance to the majors. All potential majors must have a grade point average of at least 2.4 overall from CWU and have a passing score on the required grammar, spelling and punctuation test.
3. Students wishing to apply for entrance to any of the departmental majors must submit a major application form, a current CAPS report or an evaluation by a Communication faculty member, a letter of application, and test scores from the departmental admissions test in accordance with department policies.
4. Students must earn a minimum grade of C- in every course allowed toward fulfilling any major and/or minor requirements.
5. The Communication Department reserves the right to modify these requirements as the needs of the Department change and would supersede policies previously published in this catalog.

Department Policies

1. Some required upper-division Communication courses in Public Relations,

Journalism, and Communication are limited to students who have been accepted as majors or minors in those programs. Permission to register for these courses must be obtained from the department office. Check catalog listings for specifics about each course.

2. Internship credits: All majors are required to take 5 credits of COM 490, Cooperative Field Experience. Communication Studies majors may elect to take COM 485, Thesis, instead of COM 490. Students shall receive COM 490 credit only if they have major status at the time they enroll for Cooperative Field Experience credit. Students not having major status shall receive COM 290 credit.
3. All Communication Department majors are required to complete a minor from outside the department of at least 20 credits. The minor must be approved by the student's advisor as being compatible with the student's long-term academic and career goals. Advertising is considered an internal-department minor and does not fulfill this requirement.

Honors in Communication

The Communication Department recognizes and rewards superior scholarship. Qualified students are encouraged to enter the Department's honors program. Entrance requirements include junior or senior class standing, an overall GPA of 3.0, a GPA of 3.4 in courses taken in communication and completion of an honors project. Please contact the Department Chair for further information.

Bachelor of Arts

These courses set the foundation of learning for all disciplines in the communication professions. Students will learn the concepts, skills and professional ethics needed to be communication professionals in our society. All Communication majors must complete the following core classes:

Required Courses	Credits
COM 201, Introduction to Mass Media	4
COM 207, Survey of Oral Communication	4
COM 208, Writing Across the Media	4
COM 289, Communication Orientation	1
COM 300, Communication Research Methods	3
COM 321, Visual Communication	4
COM 333, Communication Ethics	3
COM 489, Portfolio Assessment	1

Total Core Classes 24

Communication Studies (2010)

The Communication Studies major combines traditional liberal arts courses with professional courses in oral, written, and

visual communication. It is intended for students who seek broad-based training in communication, suitable for graduate study, professional study, or a variety of careers in business and industry.

Communication Core Courses 24

Required Courses	Credits
COM 251, Group Discussion	4
OR COM 252, Argumentation and Debate (4)	
COM 253, Interpersonal Communication	4
OR COM 302, Intercultural Communication (4)	
COM 401, Communication Concepts and Processes	4
Select one of the following:	4
COM 369, Mass Media and Society (3)	
COM 382, Media History (3)	
COM 330, Media Aesthetics (3)	
COM 460, Communication Law (4)	
COM 340, Rhetorical Theories of Communication	4
COM 345, Business and Professional Speaking	4
COM 350, Persuasion	4
COM 365, Organizational Communication	4
Select one of the following:	4
COM 375, Interviewing (4)	
COM 380, Nonverbal Communication (4)	
COM 430, Listening (4)	
COM 445, Speech Criticism	4
OR COM 450, Speech Composition (4)	
COM 451, Assessment of Communication Behavior	4
COM 485, Senior Seminar (Thesis) OR COM 490, Cooperative Education	5

Total (including core classes) 72-73

Public Relations Major (6625)

Organizations, whether they are industrial, governmental, educational, or corporate, require individuals who communicate with various internal and external publics. Accurate information on internal operations as they affect the public, as well as policies and decisions of the organization, must be communicated by representatives of the organization. Such persons must be able to speak to groups persuasively, be familiar with all aspects of research, be responsible for monitoring public attitudes and concerns, and be capable of creating various types of publicity and promotional materials. Public relations practitioners design internal communication programs for employees, management and other key stakeholder publics.

Communication Core Courses 24

Public Relations Core Courses	Credits
COM 270, Introduction to Public Relations	4

COM 370, Writing for Public Relations	4
COM 349, Media Management (4) OR COM 440, Corporate Television (4)	4
COM 460, Communication Law	4
COM 470, Applied Public Relations	5
COM 475, Public Relations and Advertising Management	4
COM 487, Public Relations Professional Seminar	3
ME 461, Advertising and Sales Promotion	5
COM 490, Cooperative Education	5
Select from the following:	5
COM 306, Introduction to On-line Media (4)	
COM 310, Broadcast News Writing (4)	
COM 342, Newswatch Reporting (1)	
COM 348, Publication Design (3)	
COM 468, Observer (1-2)	
COM 478, Advanced Newspaper Editing (3)	
Select one from the following:	5
MKT 360, Principles of Marketing (5)	
MKT 462, Marketing Promotion Management (5)	
MKT 469, Market Research (5)	

Total (including core classes) 72

Journalism Major (4350)

The Journalism major helps students become competent in the skills, concepts and perspective they need to be successful in the media. Students will learn to communicate information to a mass audience in a variety of media—print, broadcast, and on-line. Students also will develop an appreciation for the fundamental roles the media play in our social, political and economic system.

Communication Core Courses 24

Required Courses	Credits
COM 308, Reporting	5
COM 460, Communication Law	4
COM 490, Cooperative Education	5

Select one of the following Specialties

Print Journalism Specialization (4365)	
COM 342, Newswatch Reporting	1
COM 347, Copy Editing	3
COM 348, Publication Design	3
COM 466, Public Affairs Reporting	4
COM 468, Observer (4) OR COM 478, Advanced Newspaper Editing (3-6)	7

Broadcast Journalism Specialization (4355)	
COM 310, Broadcast News Writing	4
COM 341, Television Field Production	4
COM 342, Newswatch Reporting (1) OR COM 332, Newswatch Production (1)	1
COM 442, Newswatch Management and Production (4)	8
COM 468, Observer	1

On-line Media Specialization (4360)

COM 347, Copy Editing.....	3
COM 306, Introduction to On-line Media....	4
COM 342, Newswatch Reporting.....	1
COM 406, On-line Media Skills (4).....	8
COM 468, Observer (1-2).....	2

Electives

Students must choose 8 credits of approved writing courses, 3 credits of media production and 3 credits of media management. No more than 15 credits of Observer (COM 468/478) and Newswatch (COM 342/442) may be accumulated in all categories. Students may then select at least 3 additional credits, within or outside the department, to be approved by their advisors.

Writing Courses:..... 8

COM 309, Broadcast Advertising and Scriptwriting (4)	
COM 310, Broadcast News Writing (4)	
COM 342, Newswatch Reporting (1)	
COM 370, Writing for Public Relations (4)	
COM 442, Newswatch Management and Production (4)	
COM 468, Observer (1-2)	
COM 478, Advanced Newspaper Editing (3-6)	
COM 486, Advanced Reporting Seminar (3)	

Media Production Courses:..... 3

COM 306, Introduction to On-line Media (4)	
COM 322, Television Studio Production (4)	
COM 341, Television Field Production (4)	
COM 332, Newswatch Production (1)	
COM 348, Publication Design (3)	
COM 422, Advanced Television Studio Production (4)	
COM 440, Corporate Television (4)	
COM 441, Advanced Television Field Production (4)	
COM 442, Newswatch Management and Production (4)	
COM 452/453/454, Applied Video Production (1,1,1)	
COM 470, Applied Public Relations (5)	
COM 478, Advanced Newspaper Editing (3-6)	

Management Courses:..... 3

COM 305, Advertising Copy (4)	
COM 349, Media Management (4)	
COM 442, Newswatch Management and Production (4)	
COM 475, Public Relations and Advertising Management (4)	
COM 478, Advanced Newspaper Editing (3-6)	

Other Electives:..... 3

COM 330, Media Aesthetics (3)	
COM 350, Persuasion (4)	
COM 369, Mass Media and Society (3)	

COM 375, Interviewing Principles and Techniques (4)	
COM 382, Media History (3)	
COM 422, Advanced Television Studio Production (4)	
COM 487, Public Relations Professional Seminar (3)	

Total (including core classes) 73

Communication Minor (2010)

Students in Teacher Education must meet with the Department Chair and the certification director to determine the course of study necessary for endorsement.

Required Courses	Credits
COM 201, Introduction to Mass Media.....	4
COM 207, Survey of Oral Communication... 4	
COM 208, Writing Across the Media.....	4
COM 300, Communication Research Methods.....	3
COM 321, Visual Communication.....	4
COM 333, Communication Ethics.....	3
Approved Communication Electives.....	8

Total 30

Organizational Communication Minor (5675)

The minor in Organizational Communication is designed to complement a broad spectrum of majors leading to careers in government, education, and social and community services. Emphasis is placed on an understanding of the basic nature of communication in organizations, and on the fundamental knowledge and skills necessary for effective communication in organizations at the interpersonal small group, and public (large group) levels. Students are urged to consult early with a department advisor for approval of electives courses. Credit for COM 490 will not normally be given until all other courses in the minor have been completed. Not available as a minor for students majoring in public relations.

Required Courses	Credits
COM 251, Discussion OR	
COM 302, Intercultural Communication.....	4
COM 345, Business and Professional Speaking.....	4
COM 365, Organizational Communication... 4	
COM 375, Interviewing Principles and Techniques.....	4
COM 490, Cooperative Education.....	5
Department-approved electives.....	4

Total 25

Advertising Minor (1110)

The minor in advertising provides recognition for students who complete the specified

minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

The advertising minor develops competence in advertising planning, production, and distribution. It complements a range of majors and is jointly offered by the Departments of Communication and Information Technology and Administrative Management. IT 101, Computer Applications, CS 101, Computer Basics, or demonstration of computer competence is a prerequisite to the minor.

Required Courses	Credits
COM 270, Introduction to Public Relations... 4	
COM 300, Research Methods.....	4
COM 305, Advertising Copywriting and Placement.....	4
ME 340, Principles of Selling.....	4
ME 350, Principles of Advertising.....	4
ME 461, Advertising and Sales Promotion... 5	
Select one of the following.....	3-4
COM 306, Introduction to Online Media (4)	
COM 309, Broadcast Advertising and Scriptwriting (4)	
COM 341, Television Field Production (4)	
COM 348, Publication Design (3)	
IT 389, Desktop Publishing (3)	
Select one of the following.....	4-5
ME 455, Consumer Research (5)	
COM 440, Corporate Television (4)	
COM 475, P.R. & Advertising Agency Management (4)	

Total 32-34

Communication Courses

- COM 201. Introduction to Mass Media (4).** Media study from consumer point of view: media production, politics and history. Required for entrance to major exam.
- COM 207. Survey of Oral Communication (4).** Introductory course to develop oral communication abilities for functioning effectively in small groups and before audiences.
- COM 208. Writing Across the Media (4).** Prerequisites, ENG 101, ENG 102, COM 201 (may be concurrent enrollment in COM 201). Integrated approach to media writing. Emphasizes print news writing, public relations writing, advertising copy writing, and broadcast newswriting.
- COM 250. Public Speaking: Practice and Criticism (4).** Practice in selection, organization, and presentation of effective public speeches. Attention also given to theory and practice of speech criticism.
- COM 251. Discussion (4).** Analysis and practice of communication principles affecting effectiveness of small group discussion. Includes theory and practice of leadership and problem solving in small groups.
- COM 252. Argumentation and Debate (4).** Development of skills in oral advocacy. Con-

- tent of the course will center on evidence, tests of acceptable evidence, effective implementation of evidence, patterns of reasoning, tests for validity.
- COM 253. Interpersonal Communication (4).** Investigation of theory, research and practice of the role of communication in effective interpersonal relationships.
- COM 270. Introduction to Public Relations (4).** Prerequisites, COM 208 or permission of the instructor. The basic concepts of public relations; the tools and media used in communicating with the variety of publics.
- COM 289. Communication Orientation (1).** Prerequisite or corequisite, COM 201. Survey of departmental requirements and fields of study. Required for entrance to major. Formerly COM 488. Students may not receive credit for both.
- COM 290. Cooperative Field Experience (1-6).** Internship designed to explore career opportunities in the major. Open to all students. Grade will be S/U.
- COM 296. Individual Study (1-6).** Prerequisite, permission of instructor.
- COM 298. Special Topics (1-6).**
- COM 300. Communication Research Methods (3).** Prerequisites, major status or by permission of the instructor. Methods of gathering, measuring, analyzing qualitative and quantitative communication research.
- COM 302. Intercultural Communication (4).** The objective of this course is to give the participants the skills and understanding necessary to improve communication with peoples of other nations and cultures.
- COM 305. Advertising Copywriting and Placement (4).** Prerequisite, major status or by permission of the instructor. Preparation and placement of advertising in mass and selective media. Theory and techniques of advertising writing and media buying.
- COM 306. Introduction to Online Media (4).** An introduction to the theories and concepts of the on-line media.
- COM 308. Reporting (5).** Prerequisite, COM 208, major status or by permission of the instructor. Information gathering and research skills to produce well-developed news stories for print, broadcast and online media.
- COM 309. Broadcast Advertising and Scriptwriting (4).** Prerequisites, COM 208, major status or by permission of the instructor. Principles and techniques used in writing effective radio and television commercials, promotional copy, and video scripts. Preparation of program treatments, storyboards, and scripts for broadcast-writing intensive course.
- COM 310. Broadcast News Writing (4).** Prerequisites, major status and COM 208, or by permission of the instructor. Writing and producing news copy for the electronic media. Newsgathering techniques, on the scene coverage, interviewing, and producing television newscasts. Formerly COM 289. Students may not receive credit for both.
- COM 315. Studies in Communication (1).** Prerequisite, permission of the instructor. Specialized topics in communication to increase practical communication skills. May be repeated for credit under different topics. Grade will be S or U.
- COM 321. Visual Communication (4).** Prerequisites, Major status, or permission of instructor. Understanding the communication of visual messages for an audience, production of visual images in print, video, and digital forms.
- COM 322. Television Studio Production (4).** Prerequisite, COM 321. An introduction to the production elements of a television show, with an emphasis on the function and operation of studio lighting, audio, and cameras.
- COM 330. Media Aesthetics (3).** Prerequisite, COM 321. An examination of the fundamental elements of electronic media, including light, space, motion, and sound.
- COM 332. Newswatch Production (1).** Prerequisite, COM 322. Help produce regularly scheduled newscasts on KCWU-TV. Grade will be S/U. May be repeated to a limit of six credits. Formerly COM 342B.
- COM 333. Communication Ethics (3).** Prerequisite, COM 201. The study of ethical issues in communication.
- COM 340. Rhetorical Theories of Communication (4).** Prerequisite, 15 credits of communication or permission of instructor. Survey of rhetorical theory and practice from ancient to modern times. Examination of classical, renaissance and modern historical periods and transitions to current theories of communication.
- COM 341. Television Field Production (4).** Prerequisite, major status, COM 321 and COM 309 or COM 310, or permission of instructor. Principles and techniques of information gathering and visual storytelling. Applications of video to journalism, advertising and public relations.
- COM 342. Newswatch Reporting (1).** Prerequisite, COM 208 or permission of instructor. Gather, write, report and report news stories for regularly scheduled newscasts on KCWU-TV. Grade will be S or U. May be repeated to a limit of six credits. Formerly COM 342A.
- COM 345. Business and Professional Speaking (4).** Prerequisite, permission. Oral communication in career and professional settings with focus on public presentations, briefings and persuasion.
- COM 347. Copy Editing (3).** Prerequisite, COM 208, major status or by permission of instructor. The editing process; edit copy for content and mechanics; write headlines and cutlines.
- COM 348. Publication Design (3).** Prerequisites, by permission of instructor or major status. Publication design, the theories of graphics, headlines and text. Management of the design process.
- COM 349. Media Management (4).** Prerequisites, major status or by permission of the instructor. Principles of management employed in the planning, organizing, staffing, and budgeting of newspapers, magazines, broadcast stations and cable television operations.
- COM 350. Persuasion (4).** Role of persuasion in society, elements of human motivation, techniques and appeals of the persuader.
- COM 351. Visual Anthropology (4).** Prerequisites, ANTH 130 or ART 225 or COM 321 or 330 or by permission of the instructor. Provides methodological, theoretical and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/manipulation in anthropological and social contexts. COM 351 and ANTH 351 are equivalent courses. Students may not receive credit for both.
- COM 365. Organizational Communication (4).** Function, forms, and patterns of communication in organizations. Effects of organizational structures and dynamics on communication. Methods of evaluating communication policies and practices as an aid to organizational management.
- COM 369. Mass Media and Society (3).** Relationship of the mass media to social institutions; including philosophy, responsibilities, regulations and criticism. COM 369 and SOC 369 are equivalent courses. Students may not receive credit for both.
- COM 370. Writing for Public Relations (4).** Prerequisite, COM 270, major status or by permission of the instructor. Practical instruction in persuasive writing, news releases, broadcast material, speeches, institutional messages, newsletter articles, employer publications, backgrounders, features, and corporate profiles.
- COM 375. Interviewing Principles and Techniques (4).** Examination of the basic principles and techniques of interviewing and their application in informational, employment, and persuasive/counseling contexts. Extensive in-class and community experience in interviewing provided.
- COM 380. Nonverbal Communication (4).** Interpretation and analysis of four categories of nonverbal behavior: paralanguage, action language, object language, and uses of space and time. Formerly COM 280/ANTH 280. COM 380 and ANTH 380 are equivalent courses. Students may not receive credit for both.
- COM 382. Media History (3).** Prerequisite, COM 201 or by permission of instructor. A

survey of the history of American media, emphasizing an understanding of the technological, social, and cultural trends affecting the print, broadcast and public relations industries.

COM 401. Communication Concepts and Processes (4). Prerequisite, major status or by permission of instructor. Examination of human communication on an individual, interpersonal, and public level. Exploration of the relationship between communication theory and the practice of communication in various professional settings.

COM 402. Gender Communication (4). Analysis of gender role development in females and males with focus on effective relationship development between sexes. Analysis and development of communication skills useful in cross-sex friendships, working relationships, and romantic/family relationships.

COM 406. Online Media Skills (4). Prerequisites, COM 306, major status or by permission of the instructor. Advanced skills, theories, and management to create on-line media. May be repeated once for credit.

COM 422. Advanced Television Studio Production (4). Prerequisites, COM 322, COM 332, major status or permission of instructor. Advanced course in creative use of television studio equipment, lighting, sound, computer graphics and editing principles. Emphasis on magazine-style, music video, and dramatic formats.

COM 429. Classroom Communication (5). Consideration of problems, practices and techniques, and means of improvement in classroom communication. Examined from the viewpoint of both teacher and student.

COM 430. Listening (4). Prerequisite, major status or permission of instructor. Principles of effective listening. Exploration of personal listening practices and improving them both in and outside the classroom setting.

COM 440. Corporate Television (4). Prerequisite, COM 309, and COM 322 or COM 341, major status, or by permission of the instructor. A study of methods used in the conceptualization, design and production of non-broadcast video programs. Consideration of management needs and training requirements.

COM 441. Advanced Television Field Production (4). Prerequisite, COM 341, major status or permission of instructor. Advanced theory and practice of electronic field production. Examines technical and aesthetic requirements of single-camera video production and editing, and multi-camera remotes.

COM 442. Newswatch Management and Production (4). Prerequisite, major status, COM 308 and COM 310, COM 341, and COM 342, major status or permission of instructor. Gather, write, report and produce regularly scheduled newscasts on KCWU-TV. May be repeated to a limit of 12 credits.

COM 445. Speech Criticism (4). Prerequisite, major status, 20 credits of communication, or permission of instructor. Theory and methodology in the description, analysis and evaluation of rhetorical discourse.

COM 450. Speech Composition (4). Prerequisite, major status or by permission of instructor and COM 250 or COM 345. Preparation and delivery of specialized forms of public address. Writing speeches for others, advanced forms of style and support, and speeches for special occasions. Offered alternate years.

COM 451. Assessment of Communication Behavior (4). Prerequisite, Major status and COM 401. Theory and practice in and study of methodology for gathering and analyzing data on human communication. Behavior identification, instrument types and uses, and assessment strategies. Offered alternate years.

COM 452, 453, 454. Applied Video Production (1,1,1). Prerequisites, COM 321, major status or by permission of the instructor. Assist in the operation and programming of KCWU-TV, Ellensburg. Grade will be S or U.

COM 460. Communication Law (4). Prerequisite, COM 201, COM 333, major status or by permission of the instructor. Understanding legal issues for the communication professions including libel, slander, privacy, copyright, and First Amendment.

COM 466. Reporting of Public Affairs (4). Prerequisites, COM 308, major status or by permission of the instructor. An advanced reporting course with emphasis on live coverage of governmental activities at the local level, including city councils, courts and law enforcement agencies, school boards, and business and the environment.

COM 468. Observer (1-2). Prerequisites, COM 208 or permission of the instructor. Reporting and photo assignments on the campus newspaper. May be repeated to a limit of 6 credits.

COM 470. Applied Public Relations (5). Prerequisite, COM 300, COM 370, major status or by permission of the instructor. Creation of a public relations program for an organization, agency or institution. Two hours lecture and four hours laboratory or field work per week.

COM 475. Public Relations and Advertising Management (4). Prerequisite, COM 470, major status or by permission of the instructor. Application of theory and concepts to managing public relations and advertising accounts.

COM 478. Advanced Newspaper Editing (3-6). Prerequisite, COM 208, COM 347, COM 468 and permission. Administrative responsibilities for students serving as editors of the campus newspaper. Variable credit with a maximum of six credits. May be repeated.

COM 485. Senior Seminar (5). Prerequisites senior standing, major status. A research

project leading to a thesis.

COM 486. Advanced Reporting Seminar (3). Prerequisites, COM 308, major status or by permission of the instructor. Issues and skills in specialized reporting and writing situations. Seminar topics will change from quarter to quarter. Class may be repeated for up to nine credits.

COM 487. Public Relations Professional Seminar (3). Prerequisite, COM 470 and Public Relations major status. Advanced Public Relations Seminar topics will change from quarter to quarter. Course may be repeated for credit.

COM 489. Portfolio Assessment (1). Prerequisite, major status, senior standing. End of program assessment activities. Preparation, presentation, and evaluation of a professional portfolio of work produced during the major.

A. Journalism

C. Public Relations

D. Communication Studies

COM 490. Cooperative Education (1-12). Prerequisite, Major status and approval of Department Chair. Individual contract arrangement involving student, faculty, and cooperating agency to gain practical experience in communication. Grade will be S/U.

COM 491. Workshop (1-6).

COM 496. Individual Study (1-6). Prerequisite, permission of instructor.

COM 498. Special Topics (1-6).

COM 499. Seminar (1-5).

Undergraduate Courses/ Programs on Reserve

The following courses and programs are on reserve and may be offered subject to program needs: COM 101. Communication and Issues (5); COM 110. Oral Communication Skills (3).

COMPUTER SCIENCE

Faculty

**Chair: James Schwing
Hebeler 219**

Professor

Boris Kovalerchuk, Artificial Intelligence, Simulation and Optimization, Computer Architecture

James Schwing, Parallel Algorithms, User Interface Design, Computer Graphics, Computer Aided Design

Associate Professor

Razvan Andonie, Neural Networks, Parallel and Distributed Computing, Computational Intelligence, Data Mining
Grant Eastman, Systems Design and Analysis, Networking, Computer Architecture
Edward Gellenbeck, User Interface Design, Web Development, Software Engineering

General Departmental Information

The Department of Computer Science offers a degree program leading to the Bachelor of Science in Computer Science. The Department of Computer Science also jointly offers a program with the Industrial Engineering Technology (IET) Department in the College of Education and Professional Studies in Computer Engineering Technology. Information related to the Computer Engineering Technology program can be found in the IET section of the catalog.

The field of computer science can trace its beginnings and much of its foundation to both mathematics and engineering. Because of this, studies in computer science range from theory through experimental techniques to engineering methodology. The purpose of the computer science curriculum is to expose students to aspects of each of these disciplines and foster an appreciation and understanding of them. To accomplish this, students are exposed to the broad theoretical basis of computer science as well as a strong laboratory component. The laboratory experience is more than simple programming. Rather, it is through the laboratories that students are introduced to both the experimental and the design aspects of computer science.

Using this philosophy as a base, the Computer Science Department has designed a curricular model that seeks to increase relevance to the real world. In particular, the senior project, a capstone course series – CS 480 and 481 – adopts a theme that expands upon the experimental and design approach of typical computer science curricula. This capstone series addresses the creativity and productivity elements required for business and industry applications today. Students become engaged in projects that investigate each stage of transforming a creative idea into a productivity enhancing system in a realistic context.

Standards for Admission

Admission to the Computer Science major or minor is selective. A cumulative grade point average of 2.50 is required in the Pre-Admission requirements listed below. Students should submit their application during the quarter in which they are completing the Pre-Admission requirements. Applications will be accepted through the last day of classes (i.e., the week before finals) of the Fall, Winter, and Spring quarters for admission the following quarter. A completed application must include the standard major application form and an advisor approved graduation plan.

Students must be accepted as a Computer Science major or minor prior to enrolling in computer science classes beyond CS 301 with the exception of CS 311. Students applying for admission to the major may register for courses for the following quarter but will be dropped if not admitted.

Students should request admission to the Computer Science Pre-Major prior to completion of the Pre-Admission requirements.

The Computer Science Department believes that advising is one of the keys to success in an undergraduate program. To that end, majors and minors are required to meet with a faculty advisor every term in order to register. Pre-majors are also encouraged to meet with their designated faculty advisor each term. Advisors and advising times are listed with the Computer Science office.

Pre-Admission Requirements

General University Requirements	Credits
ENG 101, English Composition	4
ENG 102, English Composition	4

Major Requirements

CS 110, Programming Fundamentals I	4
CS 111, Programming Fundamentals II	4
CS 301, Data Structures	4
MATH 172, Calculus	5

Pre-Admission Total 25

Bachelor of Science

Computer Science Major (2070)

In order to expose computer science majors to a broad theoretical base while emphasizing the laboratory experience, students will complete the CS Core courses. To add depth and flexibility to their academic programs, students will work out an focus area with a major advisor. A specific focus may be developed in many areas of computer science, examples include: artificial intelligence, computer systems, information systems, scientific computing, and software engineering. A table of possible sequences for focus area electives follow the core requirements.

CS Requirements Credits

Pre-Admission Major requirements	17
CS 112, Foundations of Computer Science	4
CS 302, Advanced Data Structures	4
CS 311, Computer Architecture I	4
CS 312, Computer Architecture II	4
CS 325, Technical Writing in Computer Science	3
CS 361, Principles of Programming Languages I	4
CS 362, Principles of Programming Languages II	4
CS 392, Lab Experience in Teaching in Computer Science	1
CS 420, Database Management Systems	4
CS 427, Algorithm Analysis	4
CS 446, User Interface Design	4
CS 470, Operating Systems	4
CS 480, Software Engineering	4
CS 481, Software Engineering Project	4
CS 489, Senior Colloquium	1
CS 492, Lab Experience in Teaching in Computer Science	2
MATH 260, Sets and Logic	5

MATH 330, Discrete Mathematics	5
Focus Area Electives	24

Total 106

Focus Area Electives List

Students may use additional courses as their focus area electives with the approval of their major advisor.

- CS 350, Web Development Technology
- CS 410, Formal Language Theory
- CS 418, Microprocessor Systems
- CS 435, Simulation
- CS 440, Computer Graphics
- CS 450, Computer Network and Data Communication
- CS 455, Artificial Intelligence
- CS 456, Data Mining
- CS 458, Artificial Intelligence Project
- CS 460, Optimization
- CS 465, Compiler Design
- CS 473, Parallel Computing
- CS 490, Cooperative Education (Maximum of 4 credits)
- CS 496, Individual Study
- EET 221, Basic Electricity
- EET 221.1, Basic Electricity Laboratory
- EET 312, Basic Electronics
- EET 371, Digital Circuits
- EET 372, Advanced Digital Circuit
- EET 375, Microprocessor Applications
- MATH courses at or above the level of 173
- ACCT 251, 252, Accounting I and II
- ECON 201, Principles of Macro Economics
- BUS 221, Business Statistics
- MIS 386, Management Information Systems

Possible Focus Area Sequences

The table below summarizes typical focused sequences taken by students.

- AI – Artificial Intelligence
- Sys – Computer Systems
- IS – Information Systems
- Sci – Scientific Computing
- SW – Software Design and Engineering

	AI	Sys	IS	Sci	SW
CS 350					X
CS 440					X
CS 450					X
CS 455	X				
CS 456	X		X		X
CS 458	X				
CS 473					X
CS 490					X
EET 221		X			
EET 312		X			
EET 371		X			
EET 372		X			
EET 375		X			
MATH 173	X	X		X	
MATH 265	X			X	
MATH 272				X	

MATH 273		X
MATH 311	X	
MATH 376		X
MATH 412		X
ACCT 251		X
ACCT 252		X
ECON 201		X
BUS 221		X
MIS 386		X

word processing, spreadsheet and database programs; introduction to the Internet.

CS 105. The Logical Basis of Computing (4). Problem solving; algorithm development; complexity; computability. Representation of algorithms as computer programs; data; decision and control; inherent sources of error.

CS 110. Programming Fundamentals I (4). Fundamental concepts of programming from an object-oriented perspective. Classes, objects and methods, algorithm development, problem-solving techniques, basic control structures, primitive types and arrays.

CS 111. Programming Fundamentals II (4). Prerequisites, CS 110, MATH 153. Continuation of object-oriented programming concepts introduced in CS 110. Inheritance, exceptions, graphical user interfaces, recursion, and data structures.

CS 112. Foundations of Computer Science (4). Overview of the computer science profession including basic computer organization, algorithm development and analysis, computer data representation, computer applications and social issues.

CS 157. Introduction to COBOL Programming (4). Prerequisite, CS 101 or equivalent. An introduction to the COBOL programming language. Business algorithms are developed and translated into common business oriented language programs.

CS 167. Visual Basic Programming (4). An introduction to Visual Basic programming. Topics will include problem solving, algorithm development, syntax and semantics of Visual Basic, and program debugging. Not intended for CS majors.

CS 177. Introduction to FORTRAN Programming (4). Prerequisites, MATH 153 or equivalent. Mathematical and logical algorithms are translated into FORTRAN programs.

CS 187. Introduction to C++ Programming (4). Prerequisite, MATH 130 or MATH 153 or equivalent. Mathematical and logical algorithms are translated into C++ programs.

CS 201. Technology and Society (3). The computer impact, how computers work, applications in business, government, human affairs, control of computer systems. A general survey course.

CS 284. Computer Terminal Equipment Use at CWU (1). Corequisite for courses in departments requiring use of the computer at CWU.

CS 290. Cooperative Education (1-5). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and

faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

CS 298. Special Topics (1-6).

CS 301. Data Structures (4). Prerequisites, CS 111, MATH 154. Introduction to data structures, simple list processing, basic searching and sorting techniques, stacks, queues and trees. Formerly CS 265. Students may not receive credit for both.

CS 302. Advanced Data Structures and File Processing (4). Prerequisite, CS 301, and MATH 172. Sequential, random access and indexed file organizations; B-trees; external searching and sorting; I/O buffering. Formerly CS 340. Students may not receive credit for both.

CS 305. Programming Language Survey (3). Prerequisite, CS 301. One or more sections offered each quarter, each of which features a programming language of interest for historical, functional, or theoretical reasons. Languages offered will include: B. "C++", C. "COBOL", L. "ICON", M. "SMALLTALK", N. "JAVA". Formerly CS 274. Students may not receive credit for both. May be repeated for credit under different topic.

CS 311. Computer Architecture I (4). Prerequisite, CS 112. Introduction to computer architecture, data representations, assembly language, addressing techniques.

CS 312. Computer Architecture II (4). Prerequisite, CS 301 and CS 311. Introduction to the structure of computers. Digital circuits, central processing units, memory, input/output processing, parallel architectures. Formerly CS 383. Students may not receive credit for both.

CS 325. Technical Writing in Computer Science (3). Prerequisites, ENG 102, and CS 301. Writing and editing technical material in computer science.

CS 333. Computer Science Topics for Educators (4). Prerequisite, CS 111. Use and analysis of various applications and utility software packages. Recommended for the prospective teacher.

CS 334. Computer Languages for Educators (4). Prerequisite, CS 111. Introduction to and comparison of computer languages appropriate for use by educators. Recommended for the prospective teacher.

CS 350. Web Development Technologies I (4). Prerequisite, CS 301. Client-side techniques for World Wide Web software development including XHTML, style sheets, scripting languages, and ethical issues related to the Web.

CS 351. Web Development Technologies II (4). Prerequisite, CS 350. Server-side technologies for World Wide Web software development including programming languages, database access, e-commerce, testing, and ethical issues related to the Web.

Computer Science Minor Programs

The Department of Computer Science has designed two minor programs to meet the varying needs of undergraduate students.

Computer Science Minor (2075)

This minor is designed for students who wish to investigate and basic core of the computer science discipline. This minor is appropriate for any student including those in teacher education seeking to enhance their technical computer science background.

Required Courses	Credits
CS 110, Programming Fundamentals I	4
CS 111, Programming Fundamentals II	4
CS 301, Data Structures	4
CS 311, Computer Architecture I	4
MATH 130, Finite Mathematics	5
MATH 154, Pre-calculus Mathematics II	5
MATH 260, Sets and Logic	5
Total	31

Applied Computer Science Minor (1320)

This minor is designed for students who wish to integrate a computer science component into their curriculum. This minor is appropriate for any student who wishes to include an enhanced technical computer science background as part of their overall curriculum.

Required Courses	Credits
CS 110, Programming Fundamentals I	4
CS 111, Programming Fundamentals II	4
CS 301, Data Structures	4
MATH 130, Finite Mathematics	5
MATH 154, Pre-Calculus Mathematics II or	
BUS 221, Introductory Business	
Statistics	5
Electives	12-14
At least one course will be in computer science. The other electives will be computer related and may be selected from the student's major with the approval of an advisor.	
Total	34-36

Computer Science Courses

CS 101. Computer Basics (4). Prerequisite, high school or college algebra. Literacy course; basic computer structure; introduction to

- CS 352. Web Development Technologies III (4).** Prerequisite, CS 351. Advanced technologies for World Wide Web software development including XML and its related technologies: DTD, XML Schema, XSL, and XSLT and other emerging technologies.
- CS 361. Principles of Language Design I (4).** Prerequisite, CS 302. Topics will include evolution of programming languages, syntax and semantics, bindings, scoping, data types, assignment, control, and subprograms.
- CS 362. Principles of Language Design II (4).** Prerequisites, CS 361 and MATH 260 (can be taken concurrently). Topics will include abstract data types, parallel processing, object-oriented programming, exception handling functional programming, and logic programming.
- CS 367. Advanced Visual Basic Programming (4).** Visual Basic programming and applications. Topics will include advanced data structures, error trapping and debugging, advanced VB and ActiveX controls, macros and databases. Not intended for CS majors.
- CS 392. Lab Experience in Teaching Computer Science (1).** Prerequisite, CS 301 and permission of department. Supervised experience in developing procedures and techniques in teaching computer science. Grade will be S or U.
- CS 401. Computer Architecture for Educators (3).** Prerequisite, Computer Literacy. Computer Architecture for Educators is designed to acquaint the educator with the hardware aspects of technology, particularly hardware related to activities using technology to enhance learning.
- CS 410. Formal Language Theory (4).** Prerequisite, CS 325 and MATH 230. Language classes: regular, context-free, recursive; language acceptors; finite automata, push-down automata, Turing machines. Four hours lecture per week.
- CS 418. Microprocessor Systems (4).** Prerequisites, CS 311, CS 325 and either CS 312 or EET 372. Microcomputer systems; peripheral interfacing; interrupt handling; I/O; programming techniques.
- CS 420. Database Management Systems (4).** Prerequisites, CS 302, CS 325 and MATH 330. Logical aspects of database processing; concepts of organizing data into integrated databases; hierarchical, network, and relational approaches.
- CS 427. Algorithm Analysis (4).** Prerequisites, CS 302, CS 325, and MATH 330 (minimum grade of C). Topics will include basic algorithmic analysis, algorithmic strategies, fundamental computing algorithms, basic computability, the complexity classes P and NP, and advanced algorithmic analysis.
- CS 435. Simulation (4).** Prerequisites, CS 302, CS 325, MATH 330 and MATH 311 (may be taken concurrently). Principles of computer simulation; applications of several simulation languages to continuous and discrete systems.
- CS 440. Computer Graphics (4).** Prerequisite, CS 302 and CS 325. Graphic I/O devices; 2-dimensional and 3-dimensional display techniques; display processors; clipping and windowing; hidden line removal; data structures for graphics.
- CS 446. User Interface Design and Development (4).** Prerequisites, CS 301, CS 325, and MATH 311 or BUS 221. The relationship of user interface design to human-computer interaction. Types of user interfaces, methods of evaluation, user centered design and task analysis, programming tools and environments, and hardware devices.
- CS 450. Computer Network and Data Communications (4).** Prerequisites, CS 301, CS 311, and CS 325. Device protocols; network configurations; encryption; data compression and security; satellite networks.
- CS 455. Artificial Intelligence (4).** Prerequisites, CS 302, CS 325, CS 362 and MATH 330. Introduction to the principles of artificial intelligence. Pattern matching, knowledge representation, natural language processing, expert systems.
- CS 456. Data Mining (4).** Prerequisites, CS 420 or permission of instructor and MATH 311 or BUS 221. Data mining methods for discovering hidden patterns in large databases and data warehouses with applications in business, science, and engineering.
- CS 458. Artificial Intelligence Project (2).** Prerequisite, CS 325 and CS 455. Implementation of a significant project relating to artificial intelligence.
- CS 460. Optimization (4).** Prerequisites, CS 325, CS 427, MATH 265 and MATH 311. Linear programming; game theory; PERT; network analysis; duality theory; and sensitivity analysis.
- CS 465. Compiler Design (4).** Prerequisite, CS 325, and CS 362. Theory of compiler construction and computer language design; students write a compiler.
- CS 470. Operating Systems (4).** Prerequisites, CS 302, CS 312, and CS 325. Topics will include principles of operating systems, concurrency, scheduling and dispatch, memory management, processes and threads, device management, security and protection, and file systems.
- CS 473. Parallel Computing (4).** Prerequisites, CS 325 and CS 470. Major parallel architectures and languages. Parallel programming methodologies and applications.
- CS 480. Software Engineering (4).** Prerequisites, CS 325, CS 420 and senior standing. The software development process: user requirements, specifications, design, coding, testing, maintenance, documentation and management; students work in teams to develop large software projects.
- CS 481. Software Engineering Project (4).** Prerequisites, CS 325 and CS 480. Continuation of coding, testing, and implementation phases of project begun in CS 480.
- CS 489. Senior Colloquium (1).** Prerequisites, CS 325 and senior standing. Introduction to research in Computer Science through investigation of ethical and historical topics in the field. End of major assessment activities.
- CS 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- CS 491. Workshop (1-6).** The title of the workshop and the credits shall be determined at the time the workshop is approved. Designed to give an opportunity for individual and group study of special areas of computer applications. With the approval of Department Chair, course may be designed for regular letter grade or S or U, depending upon course objectives and methods of instruction.
- CS 492. Laboratory Experience in Teaching Computer Science (1-2).** Prerequisites, CS 302, CS 392, and permission. Supervised progressive experience in developing procedures and technique in teaching computer science. May be repeated to a maximum total of 15 credits. Grade will be S or U.
- CS 493. Practicum (1-5).** Prerequisites, 15 credits in CS and permission. Supervised progressive experience in management, operation, programming or systems work in one of the university's computing centers.
- CS 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- CS 498. Special Topics (1-6).**
- CS 499. Seminar (1-5).**

ECONOMICS

Faculty Chairs:

Robert J. Carbaugh, summer and fall quarters
Shaw-Smyser 428

Koushik Ghosh, winter and spring quarters
Shaw-Smyser, 427

Professors

Robert J. Carbaugh
Koushik Ghosh
Richard S. Mack
Peter J. Saunders
Roy Savoian

Associate Professors

David W. Hedrick

Assistant Professors

Timothy P. Dittmer
Ronald Elkins
Charles S. Wassell, Jr.

General Departmental Information

Positions of responsibility in today's world are usually held by individuals who have the capacity to analyze complex problems and make intelligent decisions. Learning economics will help students think logically and improve their ability to use economic concepts to analyze "real world" problems and opportunities. In addition to preparation for business and government agency employment, an Economics major is excellent preparation for law schools, Masters of Business Administration programs and graduate programs in economics, agricultural economics and natural resource management. The Economics Department offers a Bachelor of Science degree in Economics with specializations in Managerial Economics and General Economics. Economics minors are offered to complement Accounting, Business Administration, and other majors.

The Department of Economics requires that all University general education requirements be fully met. In addition to these requirements, the B.S. Economics Major is comprised of the following components: 1) pre-admission courses providing necessary theoretical and quantitative skills to pursue studies in economics, 2) core courses in both micro and macro economic theory, and 3) a choice of supporting courses for each of the three economics major specializations.

Transfer Credits

Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any B.S. degree in the College of Business.

Upper division (300-400 level) courses may be transferred toward meeting the major

requirements only with the approval of the Department Chair and the College Dean or designee.

Transfer students must earn a minimum of 45 quarter credits at CWU to be eligible for the B.S. Economics degree. Transfer students earning fewer than 45 quarter credits in their major at CWU must receive approval from the College Dean prior to graduation.

Service to Other Majors

Students majoring outside the College of Business who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses.

Bachelor of Science Economics Major (2650) with Specialization

Coursework counting toward the major cannot be taken credit/no credit by Economics majors. Double majors are available. Interested students should consult with their advisor or the Department Chair for details prior to enrolling.

The Economics faculty have determined the following objectives which apply to all B.S. Economics graduates:

- Students completing an economics degree will possess the tools which enable them to analyze and understand macro and micro economic problems and policies.
- Students will possess qualifications and knowledge which will help them to find employment in fields related to economics.
- Students will acquire and be able to use basic tools to enable them to carry out quantitatively oriented tasks in their employment or their field of graduate studies.
- Students completing the program should possess the communication and economic skills desirable in their future employment or graduate studies.

Admission Requirements

Students must apply and be admitted to the major prior to beginning 300-400 level courses in the College of Business. At the time of application all pre-admission requirements should be substantially completed. Application forms are available in the Department offices. The completed form must be accompanied by transcripts that reflect all prior college work.

Admission will be based on grades earned in the following pre-admission courses. ENG 101 and ENG 102 must also be completed before admission.

ECON 201, Principles of Economics Micro... 5

ECON 202, Principles of Economics Macro... 5
BUS 221, Introductory Business Statistics... 5
(Prerequisite, IT 101 and MATH 130)
MATH 153, Pre-Calculus Mathematics I OR
MATH 170, Intuitive Calculus OR
MATH 172, Calculus... 5

Pre-admission Total 20

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of "C-" (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The applicant must have earned a minimum cumulative GPA of 2.00 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the College Dean or designee.

General Economics Specialization (2651)

This specialization is recommended for students desiring the traditional Economics major. Highly recommended courses: MATH 172, MATH 173, and FIN 370.

Required Courses	Credits
Pre-admission Requirements	20
ECON 301, Intermediate Microeconomic Analysis	5
ECON 302, Intermediate Macroeconomic Analysis	5
ECON 310, International Economics	5
ECON 324, Introduction to Econometrics	5
ECON 330, Money and Banking	5
ECON 332, Public Finance	5
ECON 426, Economic Research	5
MIS 386, Management Info. Systems	5
Select one of the following:	4-5
ADMG 385, Business Communications and Report Writing (5)	
COM 345, Business and Professional Speaking (4)	
ENG 310, Technical Writing (4)	

Department-approved electives selected from the following:..... 10
Any 300-400 level economics courses
One accounting course (5).

Total 74-75

Managerial Economics Specialization (2654)

This specialization is for students with an interest in both public and private sector employment and preparation for law school. Highly recommended supporting courses:

MATH 170 or MATH 172. The Managerial Economics specialization can be used as part of a double major. See your advisor for details.

Required Courses	Credits
Pre-admission Requirements	20
ECON 301, Intermediate Microeconomic Analysis	5
ECON 302, Intermediate Macroeconomic Analysis	5
ECON 452, Managerial Economics	5
ACCT 251, Accounting I	5
ACCT 252 Accounting II OR ACCT 302, Managerial Accounting Analysis	5
FIN 370, Introductory Financial Management	5
Select one of the following:	4-5
ADMG 385, Business Communications and Report Writing (5)	
COM 345, Business and Professional Speaking (4)	
ENG 310, Technical Writing (4)	
Department-approved electives selected from the following:	20
300-400 level Economics courses (except ECON 396, ECON 490, ECON 496) (15)	
300-400 level accounting, business administration and economics courses (5)	
Total	74-75

Economics Minor I (2650)

This minor is designed to accompany the Business Administration and Accounting majors. Prior approval of electives by the Economics advisor is required.

Required Courses	Credits
ECON 201, Principles of Economics Micro ..	5
ECON 202, Principles of Economics Macro ..	5
Select from the following:	5
ECON 301, Intermediate Microeconomic Analysis (5)	
ECON 302, Intermediate Macroeconomic Analysis (5)	
ECON 310, International Economics (5)	
ECON 330, Money and Banking (5)	
ECON 332, Public Finance (5)	
Select 10 additional credits from the above list OR Other 300-400 level economics courses with departmental approval	10
Total	25

Economics Minor II (2655)

This minor is designed for all majors with the exception of Business Administration and Accounting. Prior approval of electives by the Economics advisor is required.

Required Courses	Credits
ECON 201, Principles of Economics Micro ..	5
ECON 202, Principles of Economics Macro ..	5
Select from the following:	5

ECON 301, Intermediate Microeconomic Analysis (5)	
ECON 302, Intermediate Macroeconomic Analysis (5)	
ECON 310, International Economics (5)	
ECON 330, Money and Banking (5)	
ECON 332, Public Finance (5)	
Select an additional 5 elective credits from the above list OR Other 300-400 level economics courses with departmental approval	5
Total	20

Economics Courses

ECON 101. Economic Issues (5). For the student who desires a general knowledge of economics. Applications of economic principles to current social and political problems. ECON 101 cannot be substituted for either ECON 201 or 202.

ECON 102. World Economic Issues (5). An introduction to current international issues related to international trade and finance, economic development and comparative economic systems.

ECON 201. Principles of Economics Micro (5). The function of the market system in the allocation of scarce resources, determination of prices and output in competitive and monopolistic markets, and distribution of income. The role of government in the market economy.

ECON 202. Principles of Economics Macro (5). Prerequisite, ECON 201 or permission of instructor. Organization of the U.S. economy, structure and role of the monetary system, problems of employment and inflation, overall impact of government spending and taxation on the economy. Economic growth, world economic problems and a comparison of capitalism with other economic systems.

ECON 298. Special Topics (1-6).

ECON 301. Intermediate Microeconomic Analysis (5). Prerequisite, ECON 201. Markets as mechanisms for organizing and directing human activities; production of goods and services; the allocation of labor, capital, and natural resources to various productive activities; and the distribution of income. Relationship between microeconomics theory and contemporary thought, practical problems and government policies.

ECON 302. Intermediate Macroeconomic Analysis (5). Prerequisite, ECON 202. Analysis and measurement of U.S. national income and product accounts; determinants of income, employment and prices under the Classical and Keynesian systems; problems of inflation, economic growth and stabilization policy.

ECON 310. International Economics (5). Prerequisite, ECON 202. International trade

and monetary theories; analyzing economic relationships and adjustments within and among trading nations; specialization, tariffs, balance of payments, and international monetary systems.

ECON 324. Introduction to Econometrics (5). Prerequisites, ECON 201 and BUS 221 or permission. Computer application of statistical and mathematical techniques to business and economic problems.

ECON 330. Money and Banking (5). Prerequisite, ECON 202. The supply of money and the Federal Reserve System; financial intermediaries and financial instruments; macroeconomic theory and policy.

ECON 332. Public Finance (5). Prerequisite, ECON 202. Rationale of public sector; effect of government expenditure and taxation on resource allocation and income distribution; structure of federal, state and local tax systems. Emphasis is on current policy problems.

ECON 340. Development of Economic Thought (5). Prerequisite, ECON 202. The historical development of economic concepts and their classification into schools of thought. Contributions to economics from medieval to modern time and relationships among various economic, social and political philosophies.

ECON 346. Comparative Economic Systems (5). Prerequisite, any economics course. Compares the capitalist market economy to the centrally planned system and considers a variety of mixed systems. Economic structure and performance of select countries; emphasizes economies in transition and the Pacific Rim.

ECON 348. Economic History of the United States (5). Economic factors in the development of the American nation, from the European background to the present. ECON 348 and HIST 348 are equivalent courses. Students may not receive credit for both.

ECON 355. Economics of Labor (5). Prerequisite, ECON 202. Economics of the labor market, labor, productivity, investment in human capital, manpower problems and public policy.

ECON 356. Government and Business (5). The development and current status of relations between the US government and business firms. Government regulation of competition and monopoly; subsidies and public enterprise.

ECON 361. Agricultural Economics (5). Prerequisite, ECON 101 or 201. Application of basic economic concepts to farm (ranch) management and marketing. Relationship between the agricultural sector and the Federal government, and the role of agribusiness firms in processing and distributing agricultural products.

ECON 388. Economic History of Europe Since 1760 (3-5). The Industrial Revolution in Great Britain and on the Continent, its resultant social and cultural effects, the rise of trade unionism, socialism, anarchism, imperialism; economics of war in the 20th century, and the rise of the welfare state. ECON 388 and HIST 388 are equivalent courses. Students may not receive credit for both.

ECON 398. Special Topics (1-6).

ECON 412. International Economic Development (5). Prerequisite, ECON 202. Economic problems, issues, and policy decisions facing developing nations including growth theory, capital development and rates of progress in different countries.

ECON 423. Mathematical Economics (5). Prerequisites, ECON 201 and MATH 170 or MATH 172 or by permission. The application of mathematics to the theoretical and practical aspects of economic analysis.

ECON 426. Economic Research (5). Prerequisites, ECON 202, BUS 221 and CS 110. Highly recommended, ECON 302. Designed to familiarize students with an understanding of econometric theory and testing procedures. The course uses time-series approach in econometric hypotheses testing. A completion of an economic research project is required.

ECON 452. Managerial Economics (5). Prerequisites, IT 101, ECON 202 and BUS 221. Application of microeconomic theories to managerial decisions and planning utilizing the case method.

ECON 460. Contemporary Economic Problems (1-5). An examination of selected current economic issues concerning the U.S. and world economies.

ECON 462. Economics of Energy, Resources and Environment (5). Prerequisite, ECON 201 or by permission of the instructor. Economic decision making related to issues of pollution, energy, resource use, and external effects. Benefit/cost analysis, cost effectiveness, and other economic methods.

ECON 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

ECON 496. Individual Study (1-6). Prerequisite, permission of instructor.

ECON 498. Special Topics (1-6).

ECON 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: ECON 342. Evaluation of American Business Enterprise (5); ECON 434. State and Local Government Finance (5); ECON 436. Public Resource Management (4); ECON 464. Pacific Northwest Economics (5).

EDUCATION

(Teacher Preparation)

The Center for Teaching and Learning (CTL) is the unit for the Teacher Certification program at Central Washington University. Although it is the responsibility of the entire University to prepare our teachers, the CTL serves as the mechanism for a systematic curricular collaboration and communication among the departments that offer teacher education programs, as well as professional programs in school administration, school counseling and school psychology.

Constructivism serves as the philosophical foundation for our teacher preparation program, as we strive to prepare teachers who are facilitators of learning in a diverse world. Endorsement area departments within the CTL Unit are responsible for preparing teachers to be knowledge specialists while the Professional Education Program prepares candidates to master the art and science of teaching. Teacher

certification requires completion of an endorsement specialist strand leading to a State primary endorsement and completion of the required Professional Education Program.

A description of offerings in two departments immediately follows. These are the Department of Curriculum and Supervision and the Department of Teacher Education Programs. The Department of Curriculum and Supervision offers the Professional Education Programs, applicable to all students seeking an initial teaching certificate. The Department of Teacher Education Programs administers programs leading to endorsements in Bilingual Education, Early Childhood Education, Elementary Education, Reading, Special Education and English as a Second Language. Following is a list of teaching endorsement programs offered by the university along with their administering departments. Unless otherwise indicated, they are offered at the undergraduate level. It is important that you seek information from the administering department and the Teacher Certification Office regarding details about teaching endorsements.

Requirements for Secondary (Discipline-Specific) School Teaching

Students preparing to teach at the secondary level (junior and senior high school) must complete a major in a subject area in which a full-time teaching

Endorsement

Art (Visual Arts)
Bilingual Education
Biology
Chemistry
Drama
Early Childhood Education
Earth Science
Elementary Education
English
English as a Second Language
English/Language Arts
Family and Consumer Sciences
Foreign (World) Languages
Health/Fitness

Library Media

Marketing Education

Mathematics
Music: General, Choral and Instrumental
Physics
Reading

Science: Broad Area
Social Studies
Special Education: K-12 and Birth-3
Technology

Administering Department

Art
Education: Teacher Education Programs
Biological Sciences
Chemistry
Theatre Arts
Education: Teacher Education Programs
Geological Sciences
Education: Teacher Education Programs
English
Education: Teacher Education Programs
English
Family and Consumer Sciences
Foreign Languages
Physical Education, Health Education and Leisure Services
Education: Curriculum and Supervision (only Graduate)
Administrative Management and Business Education
Mathematics
Music
Physics
Education: Teacher Education Programs (also Graduate)
Science Education
Social Science
Education: Teacher Education Programs
Industrial and Engineering Technology

assignment normally can be expected (see list of appropriate majors in the Divisions of Instruction, College of Education and Professional Studies section of the catalog.) Majors of 60 or more credits do not require an accompanying minor.

Students preparing to teach on the secondary level must be advised in the appropriate academic departments. In addition to completing the required professional courses via Option I or Option II, students in secondary teaching majors must take EDCS 424, Reading in the Content Fields.

CURRICULUM AND SUPERVISION

The required foundation and professional courses for teacher preparation and licensure are administered by the Department of Curriculum and Supervision. These courses are designated by the course prefixes EDF and EDCS.

Faculty

Chair: Osman Alawiye, Ph.D., J.D.
Black 101-5

Professors

Osman Alawiye, Ph.D., J.D., Curriculum and Instruction, Law
Linda S. Beath, Ph.D., Curriculum and Instruction
Rebecca S. Bowers, Ed.D., Curriculum and Instruction
Steven A. Schmitz, Ed.D., Curriculum and Instruction
Henry Williams, Ed.D., Curriculum and Instruction

Associate Professors

Kim M. Jones, Ph.D., Curriculum and Instruction, Supervision
Dennis L. Martinen, Ed.D., Curriculum and Instruction, Supervision
Barbara A. Phillips, Ph.D., Supervision
Don B. Woodcock, Ph.D., Curriculum and Instruction, Supervision

Assistant Professors

Marwin Britto, Ph.D., Instructional Technology
Ian Loverro, Ph.D., Curriculum and Instruction
Steve Nourse, Ed.D., Curriculum and Instruction, Supervision
Lee Plourde, Ph.D., Curriculum and Instruction, Supervision, Administration

Lecturers

Janie Matheson
Kay Prather
Karen Roberts
Tamsin Swain
Cindy Vielbig

Foundation and professional courses in the Department of Curriculum and Supervision, in close cooperation with other departments, prepare students for the residency teaching certificate in elementary, middle/junior, or high schools. Students must be admitted to the Teacher Education program, as well as to the University, before enrolling in teacher education courses.

PROFESSIONAL EDUCATION PROGRAM OPTIONS

Alternate professional education programs have been developed for students preparing to teach. Students preparing to teach must complete one of the two following options:

OPTION I

(2820 - elementary)

(2825 - secondary discipline-specific teaching)

Option I is a campus-centered approach to teacher preparation. Students should begin Option I during the second or third quarter of the sophomore year.

Since EDCS 300 is offered only in August-September for Option I, students should enroll for EDCS 300 prior to their junior year. Student teaching is completed at one of the approved off-campus locations.

OPTION II

(2830 - elementary)

(2835 - secondary discipline-specific teaching)

Option II is a field-based approach to teacher preparation. The program requires students to be off-campus two quarters. Students can begin this program any quarter except summer. The first quarter off campus (9 credits) will be completed at a CWU designated field center. The 9-credit block consists of EDCS 300A and EDCS 392. (Students usually take one or two evening classes to make up a full load of 15-16 credits.) The second quarter off-campus is the student teaching experience which may be done in any of the approved off-campus locations.

Check catalog for course descriptions, prerequisites, and requirements for completing courses. Some must be taken in sequence. See an advisor.

Courses

Credits

Option I:

EDCS 300, Pre-Autumn Field Experience . . . 4
EDF 301, Teaching: An Orientation 3

Option II:

EDCS 300A, Teaching: Introductory Field Experience 4
EDCS 392, Practicum 5

OPTIONS I AND II

EDF 301A, Introduction to Education (1)
(Only required of students with approved substitutions for EDF 301 or EDCS 300A above)

PSY 314, Human Development and the Learner 4

EDF 302, Introduction to Students with Disabilities 4

*PSY 315, Educational Psychology 4

*EDCS/BSED 316, Educational Technology 3

*EDCS 311, Teaching: Curriculum, Methods, and Materials 5

*EDCS 444, Educational Issues and Law . . . 3

*EDCS 442, Student Teaching 16

Select one Socio-Cultural course: 3-5

EDCS 431, Intercultural Education (3)

**ETS 101, Ethnic Awareness (4)

**ANTH 130, Introduction to Cultural Anthropology (5)

SOC 365, Minority Groups (5)

Students admitted into the Teacher Preparation Program as of Fall Quarter 2003 are required, before graduation, to present a complete electronic portfolio demonstrating their content pedagogical and professional knowledge, skills, and disposition as a partial fulfillment of their graduation requirements.

*These courses require completion of PSY 314 and EDF 301 or EDCS 300A or EDF 301A as prerequisites.

**These courses count toward breadth requirements.

Option I and II-Elementary

Total 49-53

Additional Requirement for Secondary Discipline-Specific Teaching Majors (Options I and II):

EDCS 424, Reading in the Content Fields . . 3

Option I and II - Secondary Discipline-Specific Total 52-56

NOTE: EDF 302, EDCS 424, and EDCS 444 may be completed after student teaching.

Student Teaching

Students must complete a minimum of 16 quarter credits of student teaching on an all-day basis for one quarter. To qualify for certification to teach in more than one specialization, students must meet all requirements listed in the catalog for each specialization.

Applications for student teaching must be brought into the Curriculum and Supervision Office (Black Hall 101).

Student teaching assignments are made according to the following policies.

- All prerequisites in the course description for student teaching must be completed.
- One quarter in residence at CWU is required before a student may be assigned to student teaching, unless an exception is approved by the Chair of the Department of Curriculum and Supervision.
- Students must be endorsed for student teaching by their major and minor departments. The endorsement requires completion of 75 percent of the major and minor areas. See major and minor departments for advising.
- Most student teaching assignments will be made at centers outside Kittitas County.
- Student requests for choice of student teaching centers and grade levels will be considered. Final responsibility for student teaching placement rests with the Chair of the Department of Curriculum and Supervision.
- Student teachers wishing to enroll in additional coursework during their student teaching experience, must obtain the approval of the Curriculum and Supervision Department Chair.
- A minimum GPA of 3.0 for the last 45 quarter credits or overall accumulative (using all college course work) is required prior to applying for student teaching.
- Fingerprint clearance from both the Washington State Patrol and the FBI must be on file in the Office of the Associate Dean of the College of Education and Professional Studies prior to applying for student teaching.
- Applications for certification must be on file in the Office of the Associate Dean of the College of Education and Professional Studies one quarter prior to student teaching.

TEACHER EDUCATION PROGRAMS

Faculty

Chair: David N. Shorr, Ph.D.
Black Hall 101

Professors

Minerva L. Caples, Ed.D., Elementary/Secondary/
Bilingual/TESL/Social Studies/Language
Arts

James L. DePaepe, Ph.D., Special Education
Susan Donahoe, Ph.D., Reading/Language
Arts

Dan Fennerty, Ed.D., Special Education
Gail Goss, Ed.D., Reading

Nancy Jurenka, Ed.D., Elementary Education/Reading

David Majsterek, Ed.D., Special Education,
Early Childhood Education
Jack McPherson, Ph.D., Administration
James G. Pappas, Ed.D., Administration
Debra Prigge, Ed.D., Special Education
David Shorr, Ph.D., Early Childhood Education
Alberta Thyfault, Ph.D., Special Education

Associate Professors

Carol Butterfield, Ph.D., Elementary Education/Reading/
Bilingual Education/TESL
Christina Curran, Ph.D., Special Education
Cory Gann, Ph.D., Early Childhood Education
Connie Lambert, Ph.D., Special Education
Keith Salyer, Ph.D., Elementary Education
Andrea C. Sledge, Ph.D., Reading, Language
Arts

Assistant Professors

Leland Chapman, Ph.D., Administration
Catherine Connery, Bilingual Education/TESL
Tina Georgeson, Ed.D., Elementary Education/Early Childhood Education
Craig Hughes, Ph.D., Bilingual
Education/TESL
Gary Shelly, Ph.D., Administration

General Departmental Information

Major and/or minor programs in the Department of Teacher Education Programs include Early Childhood Education, Bilingual/Teaching English as a Second Language, Elementary Education, Reading, and Special Education. The courses in these programs are designated by the course prefixes EDEC, EDBL, EDEL, EDRD, and EDSE respectively.

In addition to a major and/or minor, students must complete the Professional Education Program. Students completing a Special Education major or minor must complete EDSC 424 (or EDRD 308 for those also seeking an Elementary Major) as part of the Professional Education Program. All other Teacher Education Program majors or minors do not require the completion of this course. Also, at least 75 percent of the endorsable major or minor must be completed prior to EDSC 442 (Student Teaching).

Bachelor of Arts in Education Department Majors and Minors Early Childhood Education Major (2550)

This major satisfies the endorsement for Early Childhood Education. This major is intended to prepare students to become birth through grade 3 teaching specialists. **Students who elect this major are strongly advised to simultaneously complete the Elementary Education Major (see a department advisor as to how this may be**

effectively accomplished). Also, EDSC 442 (Student Teaching) of the Education Program should be completed at the K-3 level. Students are advised to take EDEC 292, 331, and 332 as the initial portion of their studies. Successful completion of EDEC 493 is expected before student teaching. Exceptions may be granted by the department chair in unusual circumstances. EDEC 292 and EDEC 493 will be graded S or U.

Required Courses	Credits
EDEC 292, Assisting in the Child-Centered Classroom	5
EDEC 331, Child Development	3
EDEC 332, Theories in Child Development	3
EDEC 333, ECE Curriculum:	
Pre-Kindergarten	3
EDEC 334, ECE Curriculum: Kindergarten-Primary	3
EDEC 448, Parent Involvement	3
EDEC 493, Practicum in Early Childhood Education	15
Department-approved EDEC electives	10
Total	45

Elementary Education Major (2870)

This major satisfies the endorsement for Elementary Education.

Students who elect this major will be endorsed to teach in regular, self-contained elementary classrooms. EDRD 308, EDRD 309, EDRD 420 and EDEL 323 must be taken prior to EDSC 442 (Student Teaching).

Required Courses	Credits
EDRD 308, Reading I	3
*EDRD 309, Reading II	5
EDEL 323, Teaching Elementary School Mathematics	3
Math 164 or permission of instructor is a prerequisite for EDEL 323	
EDRD 420, Teaching the Language Arts	4
**EDRD 421, Teaching Children's Literature (3) OR	
ENG 422, Literature for the Middle School (4)	3-4
ART 330, Art in the Elementary School	4
HED 446, Health Education Curriculum for Elementary Teachers	3
MUS 326, Music in the Classroom	3
PE 334, Physical Education Activities for the Elementary School	3
SCED 322, Science Education in the Elementary Classroom	3
EDEL 420, Methods and Materials in the Social Sciences - Elementary	3
Department-approved electives	9
Total	45-46

*EDRD 308 is a prerequisite for EDRD 309.

**Either EDRD 421 or ENG 422 may be taken depending upon the grade level the student is expecting to teach.

Special Education Major

The Special Education majors offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. Students electing special education teaching must follow one of the plans outlined below. EDF 302 must be taken prior to or concurrently with EDSE 311.

Special Education (P-12) (7815)

This major satisfies the endorsement for Special Education. This major is for students planning to earn a teaching certificate with special education P-12 endorsement. This major requires a minor.

Required Courses	Credits
EDSE 310, Introduction to Special Education.....	4
EDSE 311, Foundations of Special Education.....	3
EDSE 410, Behavior Management for Students with Disabilities.....	3
EDSE 411, Assessment of Students with Disabilities.....	4
EDSE 422, Teaching Strategies, Curriculum, and Materials for Students with Disabilities.....	5
EDSE 426, The Child with Language Disabilities OR EDEC 415, Child Language Acquisition .	3
EDSE 431, Program Management for Students with Disabilities.....	4
EDSE 432, Career Education for Students with Disabilities.....	3
EDSE 433, Preschool for Students with Developmental Delay.....	3
EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies.....	4
EDSE 489, Research and Inquiry.....	2
EDSE 495, Practicum.....	16
Total	54

Special Education (P-3) (7820)

This major satisfies the endorsement for Early Childhood Special Education. This major is for students planning to earn a teaching certificate with early childhood special education P-3 endorsement. Requires authorization to use this major.

Required Courses	Credits
EDEC 331, Child Development OR EDEC 332, Theories in Child Development.....	3
EDSE 310, Introduction to Special Education.....	4
EDSE 311, Foundations of Special Education.....	3
EDSE 410, Behavior Management for Students with Disabilities.....	3
EDSE 411, Assessment of Students with Disabilities.....	4

EDSE 422, Teaching Strategies, Curriculum, and Materials for Students with Disabilities.....	5
EDSE 426, The Child with Language Disabilities OR EDEC 415, Child Language Acquisition.....	3
EDSE 431, Program Management for Students with Disabilities.....	4
EDSE 433, Pre-School for Students with Disabilities.....	3
EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies.....	4
EDSE 489, Research and Inquiry.....	2
EDSE 495, Practicum.....	16
Total	54

Special Education (P-12) Broad Area (7801)

This major satisfies the endorsement for Special Education. This major is for students planning to earn a teaching certificate with special education P-12 endorsement. This major does not require a minor.

Required Courses	Credits
EDSE 310, Introduction to Special Education.....	4
EDSE 311, Foundations of Special Education.....	3
EDSE 410, Behavior Management for Students with Disabilities.....	3
EDSE 411, Assessment of Students with Disabilities.....	4
EDSE 422, Teaching Strategies, Curriculum and Materials for Students with Disabilities.....	5
EDSE 426, The Child With Language Disabilities (3) OR ESEC 415, Child Language Acquisition (3).....	3
EDSE 431, Program Management for Students with Disabilities.....	4
EDSE 432, Career Education for Students with Disabilities.....	3
EDSE 433, Pre-School for Students with Developmental Delays.....	3
EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies.....	4
EDSE 489, Research and Inquiry in Special Education.....	2
EDSE 495, Practicum.....	16
*EDEL 323, Teaching Elementary School Mathematics.....	3
EDRD 308, Reading I.....	3
EDRD 309, Reading II.....	5
EDRD 420, Teaching the Language Arts.....	4
Department Approved Electives.....	3
Total	72

*MATH 164 or permission of the instructor is a prerequisite for EDEL 323.

Bilingual Education / Teaching English as a Second Language Minor (1573)

This minor satisfies the endorsements for Bilingual Education and English as a Second Language. This minor serves the goals and requirements of students wishing to teach in classrooms characterized by cultural and linguistic diversity. The Bilingual/TESL minor leads to K-12 endorsements in Bilingual Education and English as a Second Language. Note the foreign language requirement below.

Required Courses	Credits
EDBL 312, Foundations in Bilingual Education.....	3
EDBL 318, Culture and Curriculum.....	3
EDBL 433, Educational Linguistics (3) OR ANTH 381, Language in Culture (4) ...	3-4
EDBL 435, Bilingual Education in the Content Area.....	3
EDBL 438, Teaching English as a Second Language.....	3
EDBL 439, Testing English as a Second Language.....	2
EDBL 440, Reading English as a Second Language.....	3
EDBL 492, Practicum.....	3
TESL minor advisor approved Foreign Language electives.....	6

Total 29-30

Early Childhood Education Minor (2550)

This minor satisfies the endorsement for Early Childhood Education. Students are expected to seek program advisement in planning the minor. The ECE minor has a child studies emphasis and is an approved minor for elementary education majors.

Required Courses	Credits
EDEC 292, Assisting in the Early Childhood Classroom.....	5
EDEC 331, Child Development OR EDEC 332, Theories in Child Development.....	3
EDEC 333, ECE Curriculum: Pre-Kindergarten OR EDEC 334, ECE Curriculum: Kindergarten.....	3
EDEC 448, Parent Involvement.....	3
Select from the following:.....	6
EDEC 310, Infant Education (3)	
EDBL 312, Foundations in Bilingual Education OR EDBL 318, Culture and Curriculum (3)	
EDEC 354, Childhood Learning (3)	
EDEC 415, Child Language Acquisition (3)	
EDEC 421, Play in Childhood (3)	
EDEC 432, Child Development Research (3)	
Department-approved electives:.....	4

Total 24

Reading Minor (6675)

This minor satisfies the endorsement for Reading. The Reading Minor, with campus and field experiences, is designed to prepare reading teachers and strengthen background preparation of elementary teachers. Because EDRD 308 is a prerequisite for five required courses (EDRD 410, EDRD 411, EDRD 412, EDRD 413 and EDRD 493) and EDRD 309 is a prerequisite for four required courses (EDRD 410, EDRD 412, EDRD 413 and EDRD 493), the minor should be commenced in the junior year. *EDRD 493 also requires permission of the department (designated as the instructor of EDRD 493). Permission will not be granted until four required courses in the Reading minor, excluding prerequisite courses, are completed or will be completed the quarter prior to enrollment.

Required Courses	Credits
EDRD 410, Teaching Word Recognition Skills	3
EDRD 411, Teaching Comprehension	3
EDRD 412, Assessment of Reading Skills . . .	3
EDRD 413, Methods and Materials for Reading Instruction	3
*EDRD 421, Teaching Children's Literature (3) OR	
*ENG 422, Literature for the Middle School (4)	3 - 4
EDCS 424, Teaching Reading in Content Fields	3
EDRD 493, Reading Practicum	5
Advisor Approved Electives selected from, but not limited to the following:	3
EDRD 414, Teaching Reading in a Multi-cultural Setting (3)	
EDRD 415, Reading for the Gifted (3)	
EDRD 416, Strategies, Techniques and Materials for Teaching Reluctant Readers (3)	
EDRD 417, Reading Readiness and Beginning Reading (3)	
EDRD 418, Reading and Linguistics (3)	
EDRD 419, Storytelling Techniques (3)	
EDBL 440, Reading English as a Secondary Language (3)	

Total 26-27

*Either EDRD 421 or ENG 422 may be taken depending upon the grade level the student is expecting to teach.

Special Education Minor (7800)

The Special Education programs offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. The minor may serve as a "pre-endorsement" plan for those wishing to add the special education endorsement at a later date. See a special education advisor for your individualized pre-endorsement plan.

Required Courses	Credits
EDSE 310, Introduction to Special Education.	4
EDSE 311, Foundations of Special Education.	3
EDSE 410, Behavior Management for Students with Disabilities	3
EDSE 411, Assessment of Students with Disabilities	4
EDSE 422, Teaching Strategies, Curriculum, and Materials for Students with Disabilities	5
EDSE 431, Program Management for Students with Disabilities	4
EDSE 432, Career Education for Students with Disabilities	3
EDSE 433, Preschool for Children with Developmental Delay	3
EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies	4

Total 33

Endorsements for Special Education

Students who hold a current teaching certificate and are endorsed in other areas may earn endorsement in special education. See a Special Education Advisor for more information.

Teaching English as a Second Language (TESL) Minor (8400)

This minor satisfies the endorsement for English as a Second Language. This minor prepares students to teach in classrooms where second language students are enrolled. While the Bilingual/TESL minor leads to a Bilingual education endorsement, the TESL minor leads to an English as a second language endorsement. It also offers introductory preparation for persons intending to teach English in other countries.

Required Courses	Credits
EDBL 312, Foundations in Bilingual Education	3
EDBL 318, Culture and Curriculum	3
EDBL 433, Educational Linguistics (3) OR ANTH 381, Language in Culture (4)	3-4
EDBL 438, Teaching English as a Second Language	3
EDBL 439, Testing English as a Second Language	2
EDBL 440, Reading English as a Second Language	3
EDEC 415, Child Language Acquisition	3
EDBL 492, Practicum	3
TESL minor advisor approved electives	4

Total 27-28

Bilingual Education Courses

EDBL 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDBL 298. Special Topics (1-6). Formerly ED/ECE 298.

EDBL 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDBL 312. Foundations in Bilingual Education (3). Education of students whose primary language is other than English. Research on linguistic, social and community issues pertaining to bilingualism and bilingual education.

EDBL 318. Culture and Curriculum (3). ANTH 130 recommended. The importance of culture-based curriculum to children, families and communities, and its creation, use and evaluation. Formerly ECE 318. Students may not receive credit for both.

EDBL 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDBL 398. Special Topics (1-6). Formerly ED and ECE 398.

EDBL 433. Educational Linguistics (3). Phonology, syntax and semantics applicable to speech and learning situations in the school. Not recommended for undergraduates with no teaching experience. Formerly ED 433. Students may not receive credit for both.

EDBL 434. Educational Principles and Second Language Instruction (ESL/SSL) (4). Prerequisite, Spanish language fluency or permission of instructor. Major language theories related to educational principles and language roles in classrooms where English and Spanish are learned as second languages. Presentations, use, practice and critique of language teaching methods. Formerly ED 434. Students may not receive credit for both.

EDBL 435. Bilingual Education in the Content Areas (3). Prerequisite, Spanish language fluency or permission of instructor. Designed to develop teacher competency related to the bilingual instruction of coursework in language arts, social studies, science and mathematics in both English and Spanish. The use of ESL in these content areas is emphasized. Taught in English and Spanish. Formerly ED 435. Students may not receive credit for both.

EDBL 438. Teaching English as a Second Language (3). Theoretical and conceptual information about language and language acquisition. Practical, applied aspects of second language learning and teaching. Formerly ED 438. Students may not receive credit for both.

EDBL 439. Testing English as a Second Language (2). Investigation of basic theories, concepts, procedures and instruments for testing English language skills of public school students for whom English is a second language. Formerly ED 439. Students may not receive credit for both.

EDBL 440. Reading English as a Second Language (3). Prerequisite, EDRD 309 or permission of instructor. Reading instruction for K-12 students who are speakers of a language other than English. Linguistic theory and information for developing and implementing strategies and techniques for literacy acquisition in English. Formerly ED 440. Students may not receive credit for both.

EDBL 441. Spanish Reading and Writing Methods-Elementary (3). Prerequisites, EDRD 308 and successful completion of third-year college level Spanish or permission of the instructor. Instructional approaches and methods in reading and writing in the Spanish language. The course is taught in English and Spanish.

EDBL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDBL 492. Practicum (1-15). Prerequisite, permission of the Teacher Education Programs department. This course will provide students with experience working in bilingual education and/or English as a second language settings. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit.

EDBL 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDBL 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDBL 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Education Courses — Curriculum and Supervision

EDCS 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDCS 298. Special Topics (1-6). Formerly ED/ECE 298.

EDCS 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDCS 300. Pre-Autumn Field Experience (4). A laboratory experience course in the first phase of Option I in the teacher preparation program. The course deals with the opening of school, professional relationships, school/community relationships, school district organization, instructional support and resource services. Students are assigned in off-campus centers for approximately four weeks prior to fall quarter. Grade will be S

or U. Formerly ED 300. Students may not receive credit for both.

EDCS 300A. Teaching: Introductory Field Experience (4). A laboratory experience course in the first phase of Option II of the teacher preparation program. May be taken only by Option II students. Grade will be S or U. Formerly ED/EDCS 300.1. Students may not receive credit for both.

EDCS 309. Service Learning (2). Student will use program of study content knowledge to improve a community situation. EDCS 309 and UNIV 309 are equivalent courses. May be repeated for credit.sx

EDCS 311. Teaching: Curriculum, Methods and Materials (5). Prerequisites, EDF 301 or EDCS 300A, PSY 314, and admission to the Teacher Preparation Program. Basic principles of instruction, fundamental teaching procedures, curriculum content, and classroom activities typical of primary, middle, and secondary levels. Formerly EDCS 311. Students may not receive credit for both.

EDCS 312. Educational Statistics (4). Use and interpretation of elementary statistical techniques. Formerly ED 312. Students may not receive credit for both.

EDCS 316. Educational Technology (3). Prerequisite, EDF 301 or EDCS 300A, PSY 314, demonstration of computer competence or IT 101 or CS 101 or equivalent, and admission to the Teacher Preparation Program. Contemporary classroom media and microcomputer technology including hypertext, classroom management, and discipline-specific software. EDCS 316 and BSED 316 are equivalent courses. Formerly ED 316. Students may not receive credit for more than one.

EDCS 392. Practicum (3-5). Prerequisite, permission of Education Department. Practical experience in a state approved K-12 educational setting. Grade will be S or U. Formerly ED 392. Students may not receive credit for both.

EDCS 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDCS 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDCS 424. Reading in the Content Fields (3). For intermediate and secondary school teachers. Focuses on the techniques needed by students to become efficient readers in various subject areas. Formerly ED 424. Students may not receive credit for both.

EDCS 431. Intercultural Education (3). Race, nationality, minority groups, income groups, urban and rural groups, and methods of teaching and measuring intergroup relations. Formerly ED 431. Students may not receive credit for both.

EDCS 442. Student Teaching (5-16). Prerequisites, admission to the Teacher Preparation Program, 3.0 cumulative GPA the last 45 credits and successful completion of professional sequence, and at least 75 percent of major and minor completed. Students must attend the seminar which accompanies the student teaching experience. The seminar will meet a total of 20 clock hours during the quarter, normally at a time other than school hours, and at a place designated by the university supervisor. All assignments for student teaching are made through the office of student teaching. In order to qualify for certification to teach in more than one specialization, students must meet all requirements as listed in the undergraduate catalog for each specialization. Students must demonstrate their competence by student teaching a full quarter for each specialization for which they wish to be endorsed. Grade will be S or U. Formerly ED 442. Students may not receive credit for both.

EDCS 444. Education Issues and Law (3). Prerequisite, EDF 301 or EDCS 300A, PSY 314, and admission to the Teacher Preparation Program. Major legal and ethical issues confronting educators, including implications for identifying and reporting child abuse. Formerly ED 444. Students may not receive credit for both.

EDCS 450. Media Development (3). Introduction to design and production of various instructional materials from manual to more complex computer techniques.

EDCS 482. Instruction and Assessment for the Middle Level: Grades 5th - 8th (3). Prerequisites, EDF 301, PSY 314, EDCS 311, and admission to Teacher Certification program. This course provides the future middle level educator with comprehensive skills in instructional methods, curriculum alignment, lesson development, and assessment methodology within the middle school environment.

EDCS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDCS 491. Workshop (1-6). Laboratory facilities will be included as part of the workshop; specialists will lead discussions on various problems concerning education. With the approval of Department Chair, course may be designated for regular letter grade or S or U, depending upon course objectives and method of instruction. Formerly ED 491.

EDCS 492. Practicum (1-15). Prerequisite, permission of the Chair of the Department of Curriculum and Supervision. Experience working in educational settings. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit. Formerly ED 492.

EDCS 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE/ED/SPED 496.

EDCS 498. Special Topics (1-6). Formerly ECE/ED/SPED 498.

EDCS 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Early Childhood Education Courses

EDEC 292. Assisting in the Child-Centered Classrooms (5). Students work with children in ECE classrooms, learning and practicing the fundamentals of guidance, curriculum implementation and maintaining the physical environment. Students participate in a 2-hour seminar each week. May be taken twice for credit with the permission of the division head. Grade will be S or U. Formerly ECE 292. Students may not receive credit for both.

EDEC 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDEC 298. Special Topics (1-6). Formerly ED/ECE 298.

EDEC 299. Seminar (1-5). May be repeated. Formerly ECE 299.

EDEC 310. Infant Education (3). Needs and characteristics of infants and toddlers. Enrichment opportunities and effects on development. Implications for persons in care giving roles. Formerly ECE 310. Students may not receive credit for both.

EDEC 331. Child Development (3). Developmental characteristics of children from conception to eight years. Includes observation techniques. EDEC 331 and FCSF 331 are equivalent courses. Formerly ECE 331. Students may not receive credit for more than one.

EDEC 332. Theories in Child Development (3). Comparison of major theories. EDEC 332 and FCSF 332 are equivalent courses. Formerly ECE 332. Students may not receive credit for more than one.

EDEC 333. ECE Curriculum: Pre-Kindergarten (3). Prerequisites, EDEC 292 and EDEC 331 or 332. Historical influences and knowledge of child development, psychological theories and contemporary models as bases for curriculum development and implementation in pre-kindergarten settings. Formerly ECE 333. Students may not receive credit for both.

EDEC 334. ECE Curriculum: Kindergarten-Primary (3). Prerequisite, EDEC 331 or 332 or PSY 314. Historical influences and knowledge of child development/psychological theories/contemporary models as a basis for curriculum development and implementation in kindergarten through primary settings. Formerly ECE 334 OR ED 334. Students may not receive credit for both.

EDEC 346. Programs and Approaches in ECE (3). Comparative study of the influences of traditional programs and contemporary models in program development for young children. Formerly ECE 346. Students may not receive credit for both.

EDEC 347. History and Philosophies of Early Childhood Education (3). Prerequisite, one psychology course. Focuses on select historical events and figures that have shaped the pedagogical and philosophical development of the field of early childhood education. Formerly ECE 347. Students may not receive credit for both.

EDEC 354. Childhood Learning (3). Prerequisite, EDEC 331 or 332. Origins and applications of learning/developmental theory emphasizing personalized, child-centered education. Formerly ECE 354. Students may not receive credit for both.

EDEC 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDEC 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDEC 415. Child Language Acquisition (3). Prerequisite, a course in child or human development (e.g., EDEC/FCSF 331, or EDEC/FCSF 332, or PSY 314) or introductory linguistics (e.g., ANTH/ENG 180) or permission of instructor. Language acquisition birth through eight years; aspects of phonological, grammatical, and semantic development in a natural language environment. Projects include transcription and grammatical analysis of a young child's speech. Formerly ECE 415. Students may not receive credit for both.

EDEC 421. Play in Childhood (3). Prerequisite, either EDEC 331 or 332 or permission of instructor. Definitions, developmental aspects, and curricular implications of play. Formerly ECE 421. Students may not receive credit for both.

EDEC 423. Materials and Manipulatives in ECE (2). Strategies are investigated for developing games and learning opportunities through the use of classic ECE manipulatives. The potential for fostering mathematical teaching knowledge and skills is emphasized.

EDEC 430. Principles and Practices of Caregiving (3). Prerequisite, EDEC 331 or equivalent. Out-of-home care of children: causes and trends; developmental needs of

infants and children as they relate to substitute care; parameters of program quality and practice. On-site evaluation of programs. EDEC 430 and FCSF 430 are equivalent courses. Formerly ECE 430. Students may not receive credit for more than one.

EDEC 432. Child Development Research (3). Prerequisite, FCSF/EDEC 331 or permission. The influence of family patterns and interaction on infant and child development; current research. EDEC 432 and FCSF 432 are equivalent courses. Formerly ECE/HOFS 432. Students may not receive credit for more than one.

EDEC 443. Lab Experience/Teaching ECE (3). Prerequisite, permission of the director. Assist ECE professors in teaching those courses which involve outside observation or participation. Formerly ECE 443. Students may not receive credit for both.

EDEC 444. Classroom Management in an ECE Classroom (3). This course provides students the opportunity to explore, apply, synthesize and evaluate techniques and strategies for creating positive classroom climates through organization and management techniques.

EDEC 447. Curriculum Exploration (3). Prerequisite, EDEC 493 or permission of the director. Guided exploration of curriculum or guidance needs as identified by student self-evaluation. Consistency with the student's personal philosophy and child development will be emphasized. Formerly ECE 447. Students may not receive credit for both.

EDEC 448. Parent Involvement (3). Parent-child and parent-school interactions as educational and developmental aids. Emphasis upon the school's use of the home and community for educational purposes. Formerly ECE/ED 448 OR ECE 445. Students may not receive credit for both.

EDEC 465. Directing ECE Programs (3). Prerequisite, permission of the director. Budgeting, governmental requirements, staffing, nutritional and health care, parental involvement, community and agency liaison, and the integration of developmental/educational curriculum. Formerly ECE 465. Students may not receive credit for both.

EDEC 489. Issues in Early Childhood Education (3). Formerly ECE 489 and 499.1. Students may not receive credit for both.

EDEC 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDEC 493. Practicum and Issues in ECE (6-15). Prerequisites, EDEC 333 and 334 or permission. Grade will be S or U. Formerly ECE, EDCS 493.1. Students may not receive credit for both.

EDEC 494. Advanced Practicum (3-10). Prerequisite, EDEC 493 or permission of the Chair of the Department of Curriculum and Supervision. A course designed to meet special needs as determined by the student, his/her advisor and the director. Grade will be S or U. Formerly ECE, EDCS, EDEC 493.2. Students may not receive credit for both.

EDEC 495. Teaching in the Early Childhood Classroom (5). Prerequisites, EDEC 493 and permission. Students prepare and investigate a child-centered classroom. Course includes both laboratory and seminar components. Formerly ECE 495. Students may not receive credit for both.

EDEC 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDEC 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDEC 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Elementary Education Courses

EDEL 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDEL 298. Special Topics (1-6). Formerly ED/ECE 298.

EDEL 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDEL 323. Teaching Elementary School Mathematics (3). Prerequisite, Math 164 or permission of instructor. Methods and materials for helping children learn mathematics with emphasis on the use of manipulatives, problem solving, cooperative learning, and communication. Formerly ED 323. Students may not receive credit for both.

EDEL 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDEL 420. Methods and Materials in the Social Sciences - Elementary (3).

EDEL 427. Primary Arithmetic Program (3). Prerequisite, EDEL 323 or equivalent. Methods of teaching mathematical concepts. Construction and use of manipulative aids and games. Formerly ED 427. Students may not receive credit for both.

EDEL 428. Intermediate and Upper Grade Arithmetic Program (3). Prerequisite, EDEL 323 or equivalent. Methods of teaching and materials utilized in teaching metrics, word problems, charting, graphing, statistics, probabilities, coordinates, negative numbers, and gaming. Includes use of the calculator as

an instructional strategy. Formerly ED 428. Students may not receive credit for both.

EDEL 468. Teaching Problem Solving Techniques for Upper Elementary and Middle School Mathematics (3). Prerequisites: EDEL 323, EDF 301, EDCS 311, and admission to Teacher Education. Methods and materials for helping the upper elementary/middle school (5th - 8th grade) student learn mathematics with emphasis on appropriate manipulatives, teaming, problem solving, and communication strategies.

EDEL 477. Middle School Students and Their Environment (3). Prerequisites: EDG 301, PSY 314, and admission to Teacher Certification. An in depth exploration of the development learning needs of 5th - 8th grade students and the physical, social, and management systems utilized by middle level education programs. The major focus of this course is to create developmentally appropriate classroom practices that merge educational developmental needs.

EDEL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDEL 492. Practicum.(1-15). Prerequisite, permission of the Teacher Education Programs department. Experience working in educational settings. Arrangements are made through the office of student teaching. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit.

EDEL 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDEL 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDEL 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Education Foundation Courses

EDF 100. Improvement of Basic Reading Skills (1-2). May be repeated. Credits will not be allowed toward meeting graduation requirements. Grade will be S or U. Formerly ED 100.

EDF 201. Tutoring Methods I (1). Principles of individualized instruction for student paraprofessional tutors. Structuring tutorials, fundamental learning strategies, assessment strategies, communication skills, integration of content mastery/learning skills. Formerly ED 201.

EDF 202. Tutoring Methods II (1). Principles of individualized instruction for student paraprofessional tutors. Learning strategies, motivational theory and techniques, tutoring students with disabilities, cross-cultural communication. Formerly ED 202.

EDF 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDF 298. Special Topics (1-6). Formerly ED/ECE 298.

EDF 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDF 301. Teaching: An Orientation (3). Teaching as a career and essential features of preparation. Study of the teacher's role and function in the school; characteristics of good teachers; preparation for professional competencies and certification; the American public school system; and the responsibilities of schools in a democratic society. Formerly ED 301. Students may not receive credit for both.

EDF 301A. Introduction to Teacher Education (1). Provides an overview of state regulations/requirements regarding teachers and K-12 students and CWU's framework for addressing these and other accrediting standards. Course required of teacher preparation students otherwise exempt from completing CWU's EDF 301.

EDF 302. Introduction to Students with Disabilities (4). Designed to introduce effective teaching strategies and strategies for adapting standard instruction to meet the needs of a range of students found in the typical classroom. This course provides information about students considered disabled as well as gifted and students with multicultural heritages. Formerly SPED 301. Students may not receive credit for both.

EDF 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDF 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDF 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDF 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDF 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDF 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Reading Education Courses

EDRD 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDRD 298. Special Topics (1-6). Formerly ED/ECE 298.

EDRD 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDRD 308. Reading I (3). First of two courses designed to prepare prospective teachers to teach reading in elementary school classrooms. Deals with processes and products of the reading act; methods and materials; assessment procedures and instruments. Formerly ED 308. Students may not receive credit for both.

EDRD 309. Reading II (5). Prerequisite, EDRD 308. Content and methodology of readiness, vocabulary development, phonic and structural analysis, comprehension and study skills. Formerly ED 309. Students may not receive credit for both.

EDRD 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDRD 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDRD 410. Teaching Word Recognition Skills (3). Prerequisite, EDRD 308. Methods for teaching the word recognition skills will be developed. Decoding as an aid to comprehension, including phonetic analysis, context clues, structural analysis, and sight vocabulary. Formerly ED 410. Students may not receive credit for both.

EDRD 411. Teaching Comprehension (3). Prerequisite, EDRD 308 or permission. Comprehension strategies and techniques; techniques for vocabulary development. Formerly ED 411. Students may not receive credit for both.

EDRD 412. Assessment of Reading Skills (3). Prerequisite, EDRD 308 or permission. Assessment instruments, procedures and interpretive skills for determining student reading levels and needs. Emphasizes the selection, administration and interpretation of tests. Formerly ED 412. Students may not receive credit for both.

EDRD 413. Methods and Materials for Reading Instruction (3). Prerequisites, EDRD 308 and 309. Strategies for classroom management, implementation of learning theories. Formerly ED 413. Students may not receive credit for both.

EDRD 414. Teaching Reading in a Multi-Cultural Setting (3). Prerequisite, EDRD 308 or permission. Strategies for teaching reading and developing language skills in a multi-cultural setting. Formerly ED 414. Students may not receive credit for both.

EDRD 415. Reading for the Gifted (3). Prerequisite, EDRD 308 or permission. Techniques for identifying and challenging the superior reader. Formerly ED 415. Students may not receive credit for both.

EDRD 416. Strategies, Techniques and Materials for Teaching Reluctant Readers (3). Prerequisite, EDRD 308 or permission. Motivational techniques and nonconventional materials for teaching reluctant readers. Formerly ED 416. Students may not receive credit for both.

EDRD 417. Reading Readiness and Beginning Reading (3). Prerequisite, EDRD 308 or permission. Language development and discrimination skills for beginning readers. Formerly ED 417. Students may not receive credit for both.

EDRD 418. Reading and Linguistics (3). Prerequisite, ANTH/ENG 180 or permission of instructor. Reading instruction built on an understanding of how language functions. Linguistic theory and information for developing strategies, methodologies and techniques for teaching children to read. Formerly ED 418. Students may not receive credit for both.

EDRD 419. Storytelling Techniques (3). Storytelling in the integrated curriculum. Students become familiar with a variety of stories and demonstrate the ability to tell stories. Formerly ED 419. Students may not receive credit for both.

EDRD 420. Teaching the Language Arts (4). Primarily for prospective elementary school teachers. Listening, writing, speaking, spelling, and handwriting development. Emphasizes curriculum, methods, materials, and research. Experienced teachers see EDEL 531. Formerly ED 420. Students may not receive credit for both.

EDRD 421. Teaching Children's Literature (3). The types of literature suited to children in grades 1-6; includes reading and evaluation of material from early folklore to present day books for children. Students may not receive credit for EDRD 421 and ENG 432. Formerly ED 421. Students may not receive credit for both.

EDRD 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDRD 493. Reading Practicum (3-5). Prerequisites, EDRD 308 and 309 and permission of Teacher Education Programs Department. Practical experience working with children in classroom settings. Grade will be S or U. Formerly ED, EDCS 493. Students may not receive credit for both.

EDRD 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDRD 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDRD 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Special Education Courses

EDSE 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDSE 310. Introduction to Special Education (4). Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming, and instruction. Skills necessary for collaborative relationships in the multidisciplinary team process will also be emphasized.

EDSE 311. Foundations of Special Education (3). Designed to provide prospective teachers with the necessary foundations for successful completion of the special education course of study including end-of-program assessment, undergraduate research, and written and oral communication skills. Formerly EDSE/SPED 303.

EDSE 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDSE 398. Special Topics (1-6). Formerly ED/ECE 398. Students may not receive credit for both.

EDSE 410. Behavior Management for Students with Disabilities (3). Fundamentals of behavior change related to the education of students with disabilities. Monitoring individual student progress and utilizing data collected for program instructional change. Formerly SPED 410. Students may not receive credit for both.

EDSE 411. Assessment of Students with Disabilities (4). Selecting, administering, scoring, and interpreting formal assessment tools. Designing and using informal testing techniques. Formerly SPED 411. Students may not receive credit for both.

EDSE 422. Teaching Strategies, Curriculum, and Materials for Students with Disabilities (5). Prerequisites, EDSE 310, 311, EDSE 410, and EDSE 411 or permission of instructor. Individual, small group and large group teaching strategies essential to individualized education programs, and selection, evaluation, and adaptation of commercially available materials, including computer applications.

EDSE 425. Deaf Culture (3). History and culture of the deaf. Social, educational, economic and psychological environments within the deaf community. Formerly SPED 425, students may not receive credit for both.

EDSE 426. The Child with Language Disabilities (3). Prerequisite, a course in child or human development or permission of instructor. An exploration of the child with language disabilities (age birth-6) from

the perspective of normal language development, assessment strategies, and remedial techniques. Recommended for teachers of children with mild and severe disabilities. Formerly SPED 426. Students may not receive credit for both.

EDSE 427. American Sign Language I (3). Introduces educational use of ASL including conversationally relevant signs, finger-spelling, numbers, grammatical principles and features of American Sign Language. Not accepted as general education credit. Formerly SPED 427. Students may not receive credit for both.

EDSE 428. American Sign Language II (3). Prerequisite, EDSE 427 or permission of instructor. Educational use of ASL structure emphasized as well as both expressive and receptive skills in fingerspelling and sign emphasized. Not accepted as general education credit. Formerly SPED 428. Students may not receive credit for both.

EDSE 429. American Sign Language III (3). Prerequisite EDSE 428 or permission of instructor. Educational use of ASL including basic signing and grammar skills with emphasis on conversation with deaf individuals, video stories and class activities. Not accepted as general education credit. Formerly SPED 429. Students may not receive credit for both.

EDSE 431. Program Management for Students with Disabilities (4). Prerequisites, EDSE 410, 411, and 422 or permission of instructor. Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming, and instruction. Also emphasizing skills necessary for collaborative relationships in the team process. Formerly SPED 431. Students may not receive credit for both.

EDSE 432. Career Education for Students with Disabilities (3). Prerequisites, EDSE 410, 411 and 422 or permission of instructor. Career awareness, pre-vocational, and vocational education. Formerly SPED 432. Students may not receive credit for both.

EDSE 433. Pre-school for Students with Developmental Delays (3). An overview of services for children with disabilities, aged birth-6, including legislation, risk factors, educational development, alternative delivery systems and intervention approaches and environments. Formerly ECE 302 OR SPED 302 or EDSE 302. Students may not receive credit for more than one.

EDSE 460. Collaboration with Parents, Paraprofessionals, and Community Agencies (4). Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming and instruction. Also emphasizing skills necessary for collaborative relationships in the team process. Formerly SPED 460. Students may not receive credit for both.

EDSE 481. Child Abuse and Neglect: Implications for School Personnel (1). Prerequisite, Admission to Teacher Education Program. Survey of research with emphasis on characteristics, legal issues, identification, procedures, and reporting systems. Formerly SPED 481. Students may not receive credit for both.

EDSE 483. Promoting Phonological Awareness in Resource Rooms (1). Prerequisite, junior standing or permission of instructor. Philosophy and practice of resource room strategies to promote literacy among students with reading difficulties will be presented. Students will evaluate/develop literacy instructional programs.

EDSE 489. Research and Inquiry (2). Prerequisites, EDSE 310, EDSE 311, EDSE 410, EDSE 422. Capstone course involving extensive research into a category of disability and related issues, includes synthesis and oral presentation of research findings.

EDSE 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDSE 491. Workshop (1-6). Formerly SPED 491.0 to 491.9.

EDSE 495. Practicum (5-16). Prerequisites, all core classes and full admission to the Teacher Education program. Practical experience with children having learning, behavioral or physical disabilities; using behavioral management techniques in an effort to bring the child up to maximum potential as determined by his/her flexibility, sociality and capacity. Grade will be S or U. Formerly SPED, EDCS 495. Students may not receive credit for both.

EDSE 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDSE 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDSE 499. Seminar (1-5). May be repeated Prerequisite, EDSE 303. Formerly ECE, ED, OR SPED 499.

Undergraduate Courses/Programs on Reserve

The following program is on reserve: Elementary Education Minor.

The following courses are on reserve and may be offered subject to program needs: EDCS 319. Cursive and Manuscript Writing; EDCS 423. Reading in the Secondary School; EDCS 432. Implementing the Career Education

Concept; EDCS 446. Directed Observation; EDCS 485. Paraprofessional Training/Supervision; EDCS 487. Group Processes and Leadership; EDCS 488. Group Dynamics and the Individual; EDF 401. Contemporary Movements; EDSE 402, Identifying the Gifted Child; EDSE 403, Creativity for the Gifted; EDSE 405, Methods and Materials for the Gifted; EDSE 412, Teaching strategies for Students with Disabilities; EDSE 424, Mainstreaming; EDSE 430, Curriculum and Materials for Students with Disabilities; EDSE 437, The Gifted Student; EDSE 482, Due Process of Law and Special Education; EDSE 485, Teaching Children With Behavior Problems; EDSE 486, Utilization of Direct Instruction Materials.

ENERGY STUDIES

Director: James L. Huckabay
Department of Geography and Land Studies
Lind 117A

Students interested in investigating energy issues are encouraged to pursue the following interdisciplinary minor which provides:

1. An introduction to the technical concepts and language relevant to energy.
2. An investigation of current and projected energy use patterns and their associated environmental conflicts.
3. A study of the legal, institutional, and economic factors that influence energy policy.

Energy Studies Minor (2885)

The following interdisciplinary minor provides a modest technical background so students may better understand and appreciate energy issues as they are explored from the perspective of various specialists.

Required Courses	Credits
IET 210, Energy Sources and Power.	3
GEOG 343, Energy Resource Alternatives . . .	3
GEOG 443, Energy Policy	5
PHYS 111, 111LAB, Introductory Physics, and Lab.	5
Select from the following:	5
ECON 462, Economics of Energy, Resources and Environment (5)	
MET 412, Alternate Energy Systems (5)	

Total 21

With the approval of the Director of Energy Studies, the student will select appropriate electives to meet personal and professional goals.

ENGLISH

Faculty

Chair: Patsy Callaghan

Language and Literature 423

Professors

Liahna Armstrong, American Literature,
Popular Culture, Film

Patsy Callaghan, Rhetoric, World Literature,
English Education

Toni Culjak, American, World and
Multicultural Literature

Bobby Cummings, Rhetoric, Teacher
Education, Writing on Computers

Philip B. Garrison, Non-fiction Prose, Poetry
Writing, World Literature, Mythology,
American Literature

Loretta Gray, TESL/TEFL, Linguistics
Charles Xingzhong Li, Linguistics, TESOL,
Linguistic Approaches to Literature

Terry Martin, English Education, Women's
Literature

Steven Olson, American Literature, Film
Joseph Powell, Creative Writing, Modern
Poetry

Gerald J. Stacy, English Renaissance Literature

Christine A. Sutphin, Victorian Literature,
English Novel, Women's Literature

Associate Professors

Laila Abdalla, English Medieval and
Renaissance Literature

George Drake, British Literature, English Novel

Paulus Pimomo, British Literature, Post
Colonial Studies

Assistant Professors

Karen Gookin, Composition

Judith Kleck, Composition

Virginia Mack, Composition

Emeritus Professors

Robert M. Benton, American Literature

Mark W. Halperin, Poetry Writing, Folk
Literature, Modern Poetry

John L. Vifian, Eighteenth-century Literature,
English Novel

General Departmental Information

Study in the English Department helps students better understand and appreciate the English language and its literature. The Department offers undergraduate and graduate work in American, British, and World Literature, in English Language Studies, in English Education, and in Writing. Work in English leads to greater skill in communication, and since literature is about people, a better understanding and appreciation of it can lead to a better understanding and appreciation of them. Study in English is an excellent preparation for a wide range of careers.

Departmental Honors in English

The honors program in English recognizes the superior scholarship of those students who are able to complete successfully an advanced individual study and writing project. To qualify for the program, students must have completed 25 credits in their major, have an overall GPA of 3.0 and 3.4 in English, and be recommended by three faculty members, including two from the Department of English.

The Chair of the Department, as Director of the program, will appoint an honors advisor and two readers to approve and direct the studies of each student who is admitted. Honor students, under the direction of their advisor, will enroll in English 496 (a three-credit course to be taken in addition to those required for the major in English) and prior to their last quarter in residence will complete a study culminating in the writing of an honors paper, an essay treating a subject appropriate for undergraduate English study and reflecting an awareness of the humanistic emphasis of the discipline. Students whose committee and program director accept the honors paper will graduate with departmental honors in English.

Bachelor of Arts

English Major (3050)

Students in this major are expected to complete English 302, Poetry and Poetics and ENG 303, Principles of English Studies prior to enrolling in other upper division major requirements.

Required Courses

ENG 302, Poetry and Poetics. 4

ENG 303, Principles of English Studies. 4

ENG 304, English Linguistics. 4

ENG 320, English Grammar. 4

Select two English Studies courses: 8

ENG 383, Literary and Critical Theory

ENG 340, The Short Story

ENG 448, 449, World Novel I, II

ENG 451, 452, English Novel I, II

ENG 475, Modern Poetry

ENG 478, 479, American Novel I, II

Select four Period courses: 16

ENG 305, 306, 307, English

Literature I, II, III

ENG 308, 309, American Literature I, II

Select one Shakespeare course: 4

ENG 361, Shakespeare, The Early Plays

OR

ENG 362, Shakespeare, The Later Plays

Select one Major Literary Figures course . . . 4

ENG 410, Studies in Major British Writers

ENG 411, Studies in Major

American Writers

ENG 414, Studies in Major
World Writers

Select two Comparative/Cultural courses: 8

ENG 328, World Literature I

ENG 329, World Literature II

ENG 330, African American Literature

ENG 331, Chicano Literature

ENG 332, Native American Literature

ENG 333, Asian American Literature

ENG 335, Studies in Women's Literature

ENG 344, Studies in Film

ENG 345, Popular Culture

Select one Writing course: 4

ENG 212, Fiction Writing

ENG 213, Poetry Writing

ENG 314, Advanced Nonfiction Prose

ENG 489, Senior Colloquium 2

Elective Credits in English. 8

Elective credits may be taken from any of the
300-level courses above and/or from the
following:

ENG 235, Studies in Folklore

ENG 247, Multicultural Literature

ENG 241, The Bible

ENG 242, Literature and Myth

Total 70

English: Teaching Major (3053)

This major satisfies the endorsement for English/Language Arts.

Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Students in this program are expected to complete English 302, Poetry and Poetics and ENG 303, Principles of English Studies prior to enrolling in other upper division major requirements. English 422, 430, and 492 are required prior to student teaching. English 430 and 492 must be taken concurrently. All other major requirements must be completed before or be completed concurrently with enrollment in ENG 489. Enrollment in English 489 is by permission.

Required Courses

ENG 302, Poetry and Poetics. 4

ENG 303, Principles of English Studies. 4

ENG 304 English Linguistics. 4

ENG 320, English Grammar. 4

Select one English Studies course: 4

ENG 383, Literary and Critical Theory

ENG 340, The Short Story

ENG 448, 449, World Novel I, II

ENG 451, 452, English Novel I, II

ENG 475, Modern Poetry

ENG 478, 479, American Novel I, II

Credits

Select three Period courses, with at least one from each category:..... 12
 ENG 305, 306, 307,
 English Literature I, II, III
 ENG 308, 309, American Literature I, II
 Select one Shakespeare course:..... 4
 ENG 361, Shakespeare, The Early Plays
 OR ENG 362, Shakespeare, The Later Plays
 Select one Major Literary Figures course: . . . 4
 ENG 410, Studies in Major British Writers
 ENG 411, Studies in Major American Writers
 ENG 414, Studies in Major World Writers
 Select two Comparative/Cultural Studies courses, one from each category: 8
 Category A: World Literature
 ENG 328 , 329, World Literature I, II
 Category B: Multicultural Literature
 ENG 247, Multicultural Literature
 ENG 330, African American Literature
 ENG 331, Chicano Literature
 ENG 332, Native American Literature
 ENG 333, Asian American Literature
 Select one Writing course:..... 4
 ENG 212, Fiction Writing
 ENG 213, Poetry Writing
 ENG 310, Technical Writing
 ENG 312, Advanced Fiction Writing
 ENG 313, Advanced Poetry Writing
 ENG 314, Advanced Nonfiction Prose
 *ENG 422, Teaching Young Adult Literature 4
 **ENG 430, Teaching English in the Secondary School 4
 ***ENG 492, Practicum..... 2
 ENG 489, Senior Colloquium..... 2

Total 64

*Prerequisite, admission to Teacher Education and 15 credits of professional sequence.
 **Prerequisite, EDCS 311 and 28 credits in English.
 ***Requires concurrent enrollment in ENG 430.

Language Arts Major (4450)

This major satisfies the endorsement for English/Language Arts. Students in this major must complete the Professional Education Program requirements for secondary certification available through the Department of Curriculum and Supervision. Students working toward a 4-12 certification who are preparing to teach at the junior high or middle school level might consider combining this major with a Teaching Social Science major or with a Teaching History minor since many middle level schools block their language arts and social studies classes.

Students in this program are expected to complete ENG 302, Poetry and Poetics and ENG 303, Principles of English Studies prior to enrolling in other upper division major requirements. English 422, 430, and 492 are required prior to student teaching. English 430 and 492 must be taken concurrently. All other major requirements must be completed before or be completed concurrently with enrollment in ENG 489. Enrollment in English 489 is by permission.

Required Courses	Credits
English Studies	
ENG 302, Poetry and Poetics..... 4	4
ENG 303, Principles of English Studies.... 4	4
Select one Period course from each group: . 8	
ENG 305, 306, 307, English Literature I, II, III	
ENG 308, 309 American Literature I, II	
ENG 314, Advanced Nonfiction Prose, OR	
ENG 310, Technical Writing 4	4
ENG 320, English Grammar 4	4
ENG 304, English Linguistics 4	4
ENG 328, World Literature I OR	
ENG 329, World Literature II 4	4
Select one of the following: 4	
ENG 247, Multicultural Literature,	
ENG 330, African American Literature	
ENG 331, Chicano Literature	
ENG 332, Native American Literature	
ENG 333, Asian American Literature	
ENG 361, Shakespeare, The Early Plays OR	
ENG 362, Shakespeare, The Later Plays . 4	4
*ENG 422, Teaching Young Adult Literature 4	4
**ENG 430, Teaching English in the Secondary School..... 4	4
***ENG 492, Practicum..... 2	2
ENG 489, Senior Colloquium 2	2
TH 312, Creative Dramatics in School and Leisure..... 3	3
COM 201, Introduction to Mass Media.... 4	4
COM 208, Writing Across the Media..... 4	4

English Minor (3050)

Required Courses	Credits
ENG 302, Poetry and Poetics..... 4	4
ENG 303, Principles of English Studies.... 4	4
Select two Period courses:..... 8	
ENG 305, 306, 307, English Literature I, II, III	
ENG 308, 309, American Literature I, II	

Select one Major Literary Figures course: . 4
 ENG 361, Shakespeare: The Early Plays
 ENG 362, Shakespeare: The Later Plays
 ENG 410, Studies in Major British Writers
 ENG 411, Studies in Major American Writers
 ENG 414, Studies in Major World Writers
 Select one Comparative/Cultural Studies course:..... 4
 ENG 328, World Literature I
 ENG 329, World Literature II
 ENG 330, African American Literature
 ENG 331, Chicano Literature
 ENG 332, Native American Literature
 ENG 333, Asian American Literature
 ENG 335, Studies in Women's Literature
 ENG 344, Studies in Film
 ENG 345, Popular Culture
 Select one Language course: 4
 ENG 304, English Linguistics
 ENG 320, English Grammar
 ENG 423, History of the Language
 ENG 413, Studies in Language
 Select one Writing course: 4
 ENG 212, Fiction Writing
 ENG 213, Poetry Writing
 ENG 314, Advanced Nonfiction Prose

Total 32

English: Teaching Minor (3053)

Students must complete the requirements for a major endorsement in another field. They are also required to complete the professional education program requirements through the Department of Curriculum and Supervision.

English 430 is required prior to student teaching.

Required Courses	Credits
ENG 247, Multicultural Literature..... 4	4
ENG 303, Principles of English Studies.... 4	4
ENG 320, English Grammar 4	4
Select one English Literature Course: 4	
ENG 305, 306, 307, English Literature I, II, III	
Select one American Literature course 4	
ENG 308, 309 American Literature I, II	
Select one Comparative/Cultural Studies course:..... 4	
ENG 328, World Literature I	
ENG 329, World Literature II	
Select one creative writing course 4	
ENG 212, Fiction Writing	
ENG 213, Poetry Writing	
ENG 314, Advanced Nonfiction Writing	

ENG 422, Teaching Young Adult Literature	4
*ENG 430, Teaching English in the Secondary School	4
ENG 492, Practicum	2

Total 38

*Prerequisite, EDCS 311 and 28 credits in English. This course required prior to student teaching.

Creative Writing Minor (2180)

Required Courses	Credits
ENG 302, Poetry and Poetics	4
ENG 303, Principles of English Studies	4
Select three Writing courses:	12
ENG 212, Fiction writing	
ENG 213, Poetry Writing	
ENG 312, Advanced Fiction Writing	
ENG 313, Advanced Poetry Writing	
ENG 314, Advanced Nonfiction Prose	
ENG 412, Advanced Writing Seminar	
Elective credits in English (ENG 304 and above)	8

Total 28

English Courses

ENG 100D. Developmental English (1-4).

Course may be repeated. A study of basic English grammar and conventional usage to improve sentence-level writing skills, with a reading component to improve comprehension as a foundation for academic writing. Credits will not be allowed toward meeting Bachelor's degree requirement. Grade will be S or U. Formerly English 100U.

ENG 100E. English as a Second Language (2-8).

Course may be repeated. Intensive, small group instruction for students for whom English is a second language, including preparation for the TOEFL examination and other aspects of English for university study. Credits will not be allowed toward meeting Bachelor's degree requirements.

ENG 100S. Basic English Spelling (3).

Required of all students whose verbal skills scores indicate deficiencies in spelling. Course may be repeated. A study of the basic sound-to-spelling correspondences and basic spelling processes in modern American English. The work that the student does will be determined by a diagnostic pre-test. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U.

ENG 100T. Transitional English (4). Course may be repeated. A study of academic written English with review of sentence and paragraph-level skills, such as word

usage, sentence structure, organization, grammar, and mechanics with a reading component to improve comprehension of academic English; students will learn to write unified, coherent paragraphs and short compositions. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U. Formerly English 100G.

ENG 100W. Remedial Writing, Basic Writing Skills (1-2). Course may be repeated. Individualized work in basic writing skills of drafting, editing, and proofreading. Intended for students whose problems are less generalized than those dealt with in English 100T. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U.

ENG 101. English Composition (4). Prerequisite, adequate ACT, COMPASS, or SAT scores. Develops writing skill in expository prose. Required of all students except those who have passed an exemption examination.

ENG 102. English Composition (4). Prerequisite, a minimum grade of C- or above in ENG 101 or exemption from 101. Develops skills in expression, inquiry, reasoning and research through composing academic essays.

ENG 105. The Literary Imagination: An Introduction to Literature (4). Human experience as it is imagined, interpreted, and made significant in the poetry, prose, fiction, and drama of the major writers of the world. For general education (breadth) credit, prerequisite, Grade of C- or above in ENG 101; must be taken for grade.

ENG 180. Introduction to Linguistics (5). Backgrounds, developments, and relation to other fields of study. ENG 180 and ANTH 180 are equivalent courses. Students may not receive credit for both.

ENG 212. Fiction Writing (4).

ENG 213. Poetry Writing (4).

ENG 235. Studies in Folklore (4). Analysis of literature of oral folk traditions as recorded in tales, songs, fables, anecdotes, toasts and ballads.

ENG 241. The Bible (4). A literary study of the canonical and non-canonical prose and poetry of the ancient Israelites in various translations; New Testament selections illustrate the continuity of ancient literary tradition. Previous critical study of literature is recommended. Formerly ENG 341.

ENG 242. Literature and Myth (4). Concepts and forms of myth in representative Western and non-Western literature. Formerly ENG 342.

ENG 247. Multicultural Literature (4). Prerequisite, grade of C- or above in ENG 101. Literary themes examined through the comparison of works from various cultures.

ENG 296. Individual Study (1-6).

ENG 298. Special Topics (1-6).

ENG 299. Seminar (1-5).

ENG 301. English Composition (4). Prerequisites, English 102. Upper division work in expository prose with emphasis on style and logic.

ENG 302. Poetry and Poetics (4). Offers practice in the interpretive reading of poetry, focusing on the elements of poetry and poetic theory.

ENG 303. Principles of English Studies (4). Provides critical reading and writing strategies necessary to studies in English; introduces the expectations and requirements of the major.

ENG 304. English Linguistics (4). Students learn to perform linguistic analysis of aspects of English and to use linguistic concepts to examine literary texts.

ENG 305. English Literature I (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in English literature from Beowulf through Milton.

ENG 306. English Literature II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in English literature from 1660-1832.

ENG 307. English Literature III (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in English literature from 1832 to present.

ENG 308. American Literature I (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in American literature from the beginning to 1865.

ENG 309. American Literature II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in American literature from 1865 to the present.

ENG 310. Technical Writing (4). Prerequisite, ENG 102 and junior standing. Practice in writing and editing technical reports.

ENG 312. Advanced Fiction Writing (4). Prerequisite, ENG 212 or instructor's permission.

ENG 313. Advanced Poetry Writing (4). Prerequisite, ENG 213 or instructor's permission.

ENG 314. Advanced Nonfiction Writing (4). Prerequisite, ENG 102 or equivalent. A creative writing course in which students will write and read essays.

- ENG 320. English Grammar (4).** A review of the concepts, terminology, and historical development of traditional grammar, the parts of speech and their functions in sentences, the elements of the sentence and its various patterns.
- ENG 321. Grammar in the Classroom (4).** This course offers students the opportunity to learn concepts and theories of English grammar and to explore ways to integrate grammar into their teaching.
- ENG 328. World Literature I (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Poetry and prose of both Western and non-Western civilization to 1500. Formerly ENG 248. Students may not receive credit for both.
- ENG 329. World Literature II (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Poetry and prose of both Western and non-Western civilization from 1500 to the present. Formerly ENG 249. Students may not receive credit for both.
- ENG 330. African American Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Study of literature by African Americans.
- ENG 331. Chicano Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. An overview of Mexican-American writing.
- ENG 332. Native American Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Study of literature by American Indians.
- ENG 333. Asian American Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Study of literature by Chinese, Japanese, Korean, Vietnamese, and other Asian/American writers.
- ENG 335. Studies in Women's Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Examines women's literature in light of contemporary feminist literary theories.
- ENG 340. The Short Story (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Extensive reading and analysis of short stories, including both older and modern writers.
- ENG 344. Studies in Film (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. The study of film as an art form, a technological system, an industry, and a social force.
- ENG 345. Popular Culture (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Literary and critical study of popular modes, media, genres, and subgenres.
- ENG 361. Shakespeare: The Earlier Plays (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303.
- ENG 362. Shakespeare: The Later Plays (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303.
- ENG 381. British Drama (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Origins to the present. Selections to be determined by the instructor. ENG 381 and TH 381 are equivalent courses. Students may not receive credit for both.
- ENG 383. Literary and Critical Theory (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. An investigation of the theory and practice of various critical perspectives and strategies as they inform the study of literary texts.
- ENG 391. Workshop (1-5).**
- ENG 398. Special Topics (1-6).**
- ENG 410. Studies in Major British Writers (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of one or two writers. May be repeated for credit under a different subtitle.
- ENG 411. Studies in Major American Writers (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of one or two writers. May be repeated for credit under a different subtitle.
- ENG 412. Advanced Writing Seminar (4).** Prerequisite, one of the following: ENG 312, 313, 314. May be repeated for a maximum of twelve credits.
- ENG 413. Studies in Language (4).** Investigation into one or more topics from the study of language - its grammar, its rhetoric, or its aesthetics. Recent topics include "Theories of Style," "Language and Meaning," "Morphology, Semantics and Spelling," and "Advanced Syntax." May be repeated for credit under a different subtitle.
- ENG 414. Studies in Major World Writers (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. An intensive study of one to three writers. May be repeated for credit under a different subtitle.
- ENG 422. Teaching Young Adult Literature (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. A study of literature written for middle level and early high school students. Prerequisite, admission to Teacher Education Program and completion of at least 15 credits of professional sequence. Prerequisite to EDCS 442, Student Teaching.
- ENG 423. History of the Language (4).** In this course, students examine the systematic, evolutionary nature of language by focusing on the development of the English language. Formerly ENG 322.
- ENG 430. Teaching English in the Secondary School (4).** Prerequisite, EDCS 311 and 28 credits in English or permission of instructor. This class is required prior to student teaching. Must enroll concurrently in ENG 492.
- ENG 448. World Novel I (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Earlier outstanding world novels in translation. Formerly ENG 348.
- ENG 449. World Novel II (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Outstanding modern world novels in translation. Formerly ENG 349.
- ENG 451. The English Novel I (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of representative English novels of the 18th and earlier 19th centuries. Formerly ENG 351. Students may not receive credit for both.
- ENG 452. The English Novel II (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of representative English novels of the later 19th and 20th centuries. Formerly ENG 352. Students may not receive credit for both.
- ENG 475. Modern Poetry (4).** Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Study of the major poets and the major developments in the poetry of the modern world, particularly in England and the United States. Formerly ENG 375. Students may not receive credit for both.
- ENG 478. American Novel I (4).** Prerequisites for English Majors, English

Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of representative American novels from the beginning of American literature to 1939. Formerly ENG 379. Students may not receive credit for both.

ENG 479. American Novel II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of representative American novels from 1940 to the present. Formerly ENG 380. Students may not receive credit for both.

ENG 480. Survey of Linguistics (4). Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ENG 480 and ANTH 480 are equivalent courses. Students may not receive credit for both.

ENG 489. Senior Colloquium (2). Prerequisites, all other major requirements completed or to be completed concurrently with enrollment in this course; admission by permission. Students prepare an end-of-major portfolio which illustrates their competence in interpreting, composing, and for teaching majors, instructional planning.

ENG 490. Cooperative education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated for a total of 12 credits. Grade will be S or U.

ENG 491. Workshop (1-10). Designed to give an opportunity for individual and group study of problems in the teaching of English.

ENG 492. Practicum (2). Prerequisites, ENG 311 and 28 credits in English or permission of instructor. Practice planning instruction, teaching, and assessing learning. Must enroll concurrently in ENG 430. Grade will be S or U.

ENG 496. Individual Study (1-6). Prerequisite, permission of instructor.

ENG 498. Special Topics (1-6).

ENG 499. Seminar (1-5).

English Programs and Courses on Reserve:

Business and Professional Communications Minor.

ENVIRONMENTAL STUDIES

Director: Christopher Kent
Lind Hall 118A

Environmental Studies Minor (3175)

The Environmental Studies minor is designed primarily to serve undergraduate education and environmental literacy. Research and graduate education, and community education and service are other goals. Top priority is given to providing a large number of students with the opportunity to assess the nature, scope, and complexities of present and impending environmental problems. This emphasis on establishing environmental literacy among a broad spectrum of students does not preclude the simultaneous development of a smaller number of highly selected environmental specialists. Ordinarily, development of expertise as an environmental specialist requires specialized work which can be pursued by means of undergraduate majors and graduate programs. Other objectives include the provision of public education programs on environmental issues and the stimulation of interdisciplinary research on environmental problems.

Required Courses	Credits
ENST 301, Earth as an Ecosystem.	5
ENST 302., Ecosystems, Resources, Population, and Culture	5
ENST 303, Environmental Management.....	5
ENST 444, Environmental Policy Formulation.....	4
Approved Elective.....	3-5
Total	22-24

Students choosing an Environmental Studies minor will propose an upper division elective course in consultation with, and subject to, the pre-approval of the ENST Director. This elective course must be taken for a grade and be in a department outside the student's major. The following courses, however, will automatically be accepted without pre-approval provided they meet the other elective requirements: ANTH/GEOG 440, BIOL 360, ECON 462, ENST 455. GEOG 445, or HIST 354/454.

The minor requires that students finish with a minimum 2.0 GPA for the 22-24 program credits, and students must also earn at least a C- on each of the five courses that comprise their ENST program.

Environmental Studies Courses

ENST 298. Special Topics (1-6).

ENST 301. Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth's physical, chemical, geological and biological processes and their interrelated "systems" aspects furnishes the thrust of this treatment.

ENST 302. Ecosystems, Resources, Population, and Culture (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture.

ENST 303. Environmental Management (5). Development of attitudes and perceptions of our environment. Examination of the economic, political and legal mechanisms and philosophical perspectives useful in managing the environment.

ENST 398. Special Topics (1-6).

ENST 444. Environmental Policy Formulation (4) Prerequisite, ENST 301, 302, 303 or permission of instructor. Students will work together in interdisciplinary teams to formulate and justify policy measures they think appropriate to meet some environmental problem investigated.

ENST 455. Environmental Literature (3). Survey of literary works that thematically explore human relationships with place and environment. Sampling of various themes and genres, with a focus on Pacific Northwest.

ENST 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

ENST 491. Workshop (1-6).

ENST 496. Individual Study (1-6).

Prerequisite, permission of instructor.

ENST 498. Special Topics (1-6).

ENST 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following course is on reserve and may be offered subject to program needs: ENST 448, Energy Use Patterns (5).

ETHNIC STUDIES

Program Director Delores Cleary, Sociology
Farrell Hall 442

Ethnic Studies Minor (3250)

Ethnic Studies is a discipline that incorporates the Social Sciences and the Humanities to explore the comparative approaches to the study of minority groups in the United States. The central mission of an Ethnic Studies program is to increase the understanding of racial and cultural diversity of American society and the dynamics of interethnic relationships. At Central Washington University the ETS program is interdisciplinary, offering courses from other disciplines with a core in Ethnic Studies. In addition to the minor program, it provides important services to teacher preparation and general education requirements.

Required Courses	Credits
ETS 101, Ethnic Awareness	4
ETS 354, Minority Experiences OR SOC 365, Minority Groups	5
SOC 386, Seminar on Racism	5
SubTotal	14

A. Choose two courses from the following. 7-10
Each course must come from a different category.

General

- ENG 247, Multicultural Literature (4)
- TH 382, Ethnic Drama (4)
- PHIL 357, Race, Class, and Gender in American Philosophy (5)

African American

- ENG 330, African American Literature (4)
- MUS 101, History of Jazz (5)

Hispanic American

- ENG 331, Chicano Literature (4)
- SPAN 301, Introduction to Hispanic Literature (3)
- SPAN 310, Hispanic Civilization and Culture (3)
- SPAN 444, Chicano Literature (3)
- SPAN 446, Hispanic Cinema (3)

Native American

- ANTH 347, Native American Cultures of North America (4)
- ANTH 349, Contemporary Native American Cultures (4)
- ENG 332, Native American Literature (4)

Asian American

- ENG 333, Asian American Literature (4)

*Special topics courses, seminars, and co-operative education credits as approved by ETS.

B. Choose two courses from below. 6-10

Each course must come from a different category.

General

- ANTH/COM 302, Intercultural Communication (4)
- ANTH 356, Gender Roles in Cross-Cultural Perspective (4)
- ETS 403, American Ethnic Literature (5)
- ANTH 355, Culture and Personality (4)
- SOC 205, American Society (5)
- SOC 354, Minority Experience (5)
- SOC 356, Sex Roles in Society (5)
- SOC 445, Social Inequality (5)

African American

- HIST 342, History of Black America to 1865 (5)
- HIST 343, History of Black America since 1865 (3-5)
- ETS 321, Survey of African American Studies (4)

Hispanic American

- ANTH 342, Hispanic Cultures of the Western U.S. (4)
- ETS 350, Survey of Chicano Studies (4)
- ETS 351, Contemporary Chicano Issues (5)
- ETS 352, Chicano Social and Psychological Perspectives (4)

Native American

- ANTH 341, Native American Cultures of the Pacific Northwest (4)
- ETS 371, Survey of American Indian Studies (5)
- ETS 373, American Indian Authors and Publications (3)
- ETS 471, Issues in American Indian Education (5)
- ETS 472, American Indian Profiles (3)

Asian American

- ETS 311, The Asian American (3)
- ETS 312, Asian American Identity and Personality (5)

*Special topics courses, seminars, and co-operative education credits as approved by ETS

Total 27-34

Ethnic Studies Courses

Ethnic Studies courses emphasize the economic and political conflict from the subordinate group perspective.

ETS 101, **Ethnic Awareness** (4). Awareness and understanding of the problems facing the American people in the area of race and ethnic relations, primarily focusing on ethnic minorities. The nature and scope of relationships between minority groups and the majority in the United States.

ETS 296, **Individual Study** (1-6).

ETS 298, **Special Topics** (1-6).

ETS 299, **Seminar** (1-5).

ETS 311, **The Asian American** (3). Prerequisite, ETS 101. An overview of demographics, his-

tory, cultures, and experiences of Asian Americans in the U.S. society. Formerly ETS 111. Students may not receive credit for both.

ETS 312 **Asian American Identity and Personality** (5). Exploring the complexity and meanings of Asian American identity; examining the responses of America to the presence of Asians and how Asian Americans themselves have taken upon various roles and identities.

ETS 321, **Survey of African American Studies** (4). Prerequisite, ETS 101. Contemporary socio-economic problems and issues; the Black experience; status; community, and leadership. Formerly ETS 121. Students may not receive credit for both.

ETS 350, **Survey of Chicano Studies** (4). Prerequisite, ETS 101. A historical and cultural survey of Chicanos from 1540 to the present with a regional emphasis in the Southwest. Formerly ETS 151. Students may not receive credit for both.

ETS 351, **Contemporary Chicano Issues** (5). Prerequisite, ETS 101 or permission of the instructor. An examination of current education, social, and political issues concerning Chicanos in American society. Formerly ETS 252. Students may not receive credit for both.

ETS 352, **Chicano Social and Psychological Perspectives** (4). Prerequisite, SOC 107 or PSY 101 or permission. An examination of social and psychological perspectives put forth by Chicano and non-Chicano interethnic relations, sex roles, and family and religion.

ETS 354, **Minority Experiences** (5). Explanations will be identified for institutional racism common to the history and character of American minorities. ETS 354 and SOC 354 are equivalent courses. Students may not receive credit for both. Formerly ETS 355.

ETS 371, **Survey of American Indian Studies** (5). Prerequisite, ETS 101. Emphasis on historical and contemporary cultural and institutional patterns: marriage and the family; religion; education; economic and political systems; relationships to society. Formerly ETS 171. Students may not receive credit for both.

ETS 373, **American Indian Authors and Publications** (3). A study of American Indian authors and publications, past and present. Emphasis on publications and literature written by and/or produced by "informants" or recorded oral literature.

ETS 398, **Special Topics** (1-6).

ETS 403, **American Ethnic Literature** (5). An introductory study of recent developments in American ethnic literature, including writing by prominent and contemporary Asian Americans, Black, Chicano, and American Indian authors.

ETS 471. Issues in American Indian Education (5). A course to give students a broad understanding of the process for educating American Indians in traditional American Indian societies and in modern society, with emphasis on the present status of American Indian education and its potential development through specialized programs.

ETS 472, American Indian Profiles (3). An intensive study of leaders within the American Indian community.

ETS 490, Contracted Field Experience (1-12)

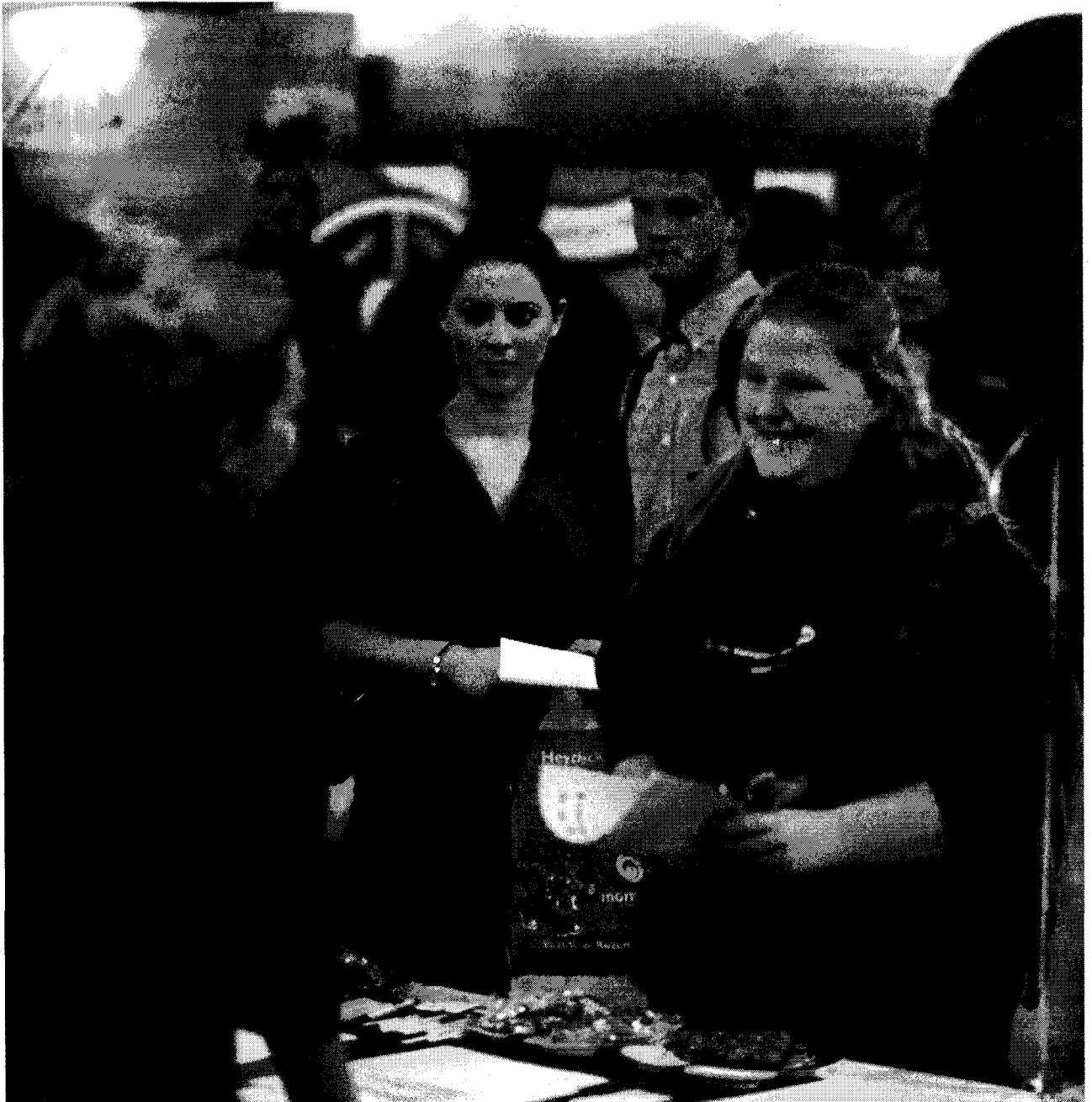
ETS 491, Workshop (1-6)

ETS 496. Individual Study (1-6). Prerequisite, permission of instructor.

ETS 498, Special Topics (1-6)

ETS 499. Seminar (1-5).

Related courses regularly offered in other departments include: ANTH 347 Native American Cultures of North America, ANTH 341 Native American Cultures of the Pacific Northwest, ENG 330 African American Literature, HIST 343 History of Black America since 1865, SOC 365 Minority Groups.



FAMILY AND CONSUMER SCIENCES

Faculty

Chair: Jan Bowers
Michaelsen 100

Professors

Joan Amby, Family Studies
Ethan Bergman, Food Science and Nutrition
Jan Bowers, Family and Consumer Sciences
Education
David L. Gee, Food Science and Nutrition
Carolyn Schactler, Apparel Design

Associate Professors

Vicki Shaffer-White, Fashion Merchandising
Marla Wyatt, Family and Consumer Sciences
Education

Assistant Professors

Nancy Buerger, Food Science and Nutrition
Shawn Christiansen, Family Studies

Lecturer

Quenby Delgado

General Departmental Information

The Department offers programs of study leading to Bachelor of Arts degrees in Family and Consumer Sciences and Family and Consumer Studies. Bachelor of Science degrees are available in Family and Consumer Sciences, Vocational Teaching, Fashion Merchandising, and in Food Science and Nutrition. There is also a Master of Science degree in Family and Consumer Sciences.

These majors offer training in a variety of fields. Specific information concerning them and their specializations is described in the introduction to each major.

Students planning to become certified for Vocational Family and Consumer Sciences Education must take the B.S. Family and Consumer Sciences major and fulfill the additional requirements as outlined by the Curriculum and Supervision Department.

The B.A. Family and Consumer Sciences major offers two specializations. Students can specialize in Family Studies or a specialization that is non-structured and permits any combination of departmental courses (and may include a limited number of courses from other departments) to create a program best suited to a particular student's interests and professional goals. The Department Chair can provide further information and guidance.

Department advisors are available for all majors and students are urged to make contact with an appropriate advisor as soon as possible. Contact the Department Chair for help in identifying an advisor.

Admission Policy for Family and Consumer Sciences

1. All students, except Family Studies majors, must have successfully completed FCSG 205 prior to being admitted to the major.
2. Students must have successfully completed ENG 101 and 102 or equivalents.
3. The application for major form must be completed, then signed by a department advisor and Chair. A current credit evaluation from Registrar Services must accompany the form.
4. Students must have a university-level cumulative GPA of at least 2.30 for full admission to a departmental major.
5. Students may be admitted as pre-majors by the Department Chair. Students admitted as pre-majors must achieve at least a 2.30 GPA as a full-time student for the following two consecutive quarters of enrollment to be fully admitted to a departmental major.
6. If the student does not meet admission requirements following pre-major admission, reapplication for admission to a department major may be made when the cumulative GPA is at least 2.30.
7. Students must earn a minimum grade of C- in each course counted towards fulfilling major and minor requirements.
8. Students must have a 2.3 minimum cumulative GPA in the major and minor to exit the program.

Bachelor of Arts

Family and Consumer Studies

Major (3350)

with Specialization

The Bachelor of Arts in Family and Consumer Studies prepares students for employment or advanced study in one of several professions in the broad area of family and consumer studies. Curriculum requirements have been approved for a specializations in Family Studies.

Family Studies Specialization (3352)

The Family Studies specialization is an interdisciplinary study of interpersonal, and family relationships. Graduates are well prepared for career opportunities in family service agencies, parent education programs, family counseling centers, other family life education settings, or advanced study in family relations. Students must successfully complete FCSF 234, Introduction to Family Studies, before being admitted to the program.

Required Courses

Credits

ANTH 130, Introduction to Cultural Anthropology	5
PSY 101, General Psychology OR SOC 107, Principles of Sociology	5
FCSF 234, Introduction to Family Studies....	4
EDEC/FCSF 331, Child Development.....	3
PSY 447, Psychology of Adolescence.....	3
PSY 452, Adult Development and Aging OR FCSF 435, Family Gerontology.....	4
FCSF 231, Human Sexuality	4
FCSF 235, Relationships and Personal Development.....	3
FCSF 336, Parent Education and Guidance... 3	
LAJ 311, Family Law OR FCSF 439, Families and Public Policy....	3-4
Select one from the following:	3-4
SOC 357, Sociology of Families (3)	
HIST 352, History of the American Family(4)	
ANTH/FCSF 333, Culture and Marriage (4)	
FCSF 434, Ethnic Diversity in Families (3)	
FCSF 334, Family Problems and Mediation .. 4	
FCSF 433, Family Life Education	4
FCSC 472, Life Management OR FCSC 371, Consumer Awareness	3-5
FCSG 490, Cooperative Education OR Approved Electives	10

Total 61-65

Personalized Studies Specialization (3353)

This specialization allows the student to construct a personalized major. It may consist of a broad exposure to all the areas of the discipline or may concentrate on one or two areas of emphasis.

Interior Design Emphasis. This emphasis prepares students for professional careers as residential, commercial, hospitality or health care interior designers. In addition, students may choose to specialize in kitchen and bath design (the program is endorsed by the National Kitchen and Bath Association). An individual course of study will be developed for each student with the interior design advisor.

Apparel Studies Emphasis. This emphasis allows students the opportunity to experience courses which are basic to skills and knowledge needed in the wide range of careers within the fashion industry. An individualized course of study will be developed for the student by the Apparel Studies advisor.

A minimum of 45 credits are required, at least 50 percent of which must be at the upper-division level. With department chair approval, a limited number of courses from other departments may be included.

The planned course of study must have the signature of both the student and a faculty advisor before submission to the department chair for approval.

**Family and Consumer Sciences
Major (3360)**

The Bachelor of Arts in Family and Consumer Sciences comprises a general introduction to the broad areas of family and consumer sciences and, with an appropriate minor, can provide students with a well-rounded preparation for life or for further advanced study.

Required Courses	Credits
FCSG 205, FCS Entry Assessment	1
FCSC 371, Consumer Awareness	3
FCSC 472, Life Management	5
FCSA 351, Sociocultural Aspects of Apparel .	3
FCSA 355, Consumer Textiles	4
FCSF 231, Human Sexuality	4
FCSF 235, Relationships and Personal Development (3) OR FCSF 234, Introduction to Family Studies (4)	3-4
FCSF 331, Child Development OR PSY 447, Psychology of Adolescence	3
FCSF 336, Parent Education and Guidance ..	3
FCSN 140, Introduction to Foods	2
FCSN 140LAB, Introduction to Foods Laboratory	2
FCSN 245, Basic Nutrition	5
FCSH 166, Applied Creativity	3
FCSH 367, Family Housing	3
FCSG 405, FCS Exit Assessment	1
Total	45-46

**Bachelor of Science
Food Science and Nutrition
Major (3465)
with Specialization**

The Bachelor of Science in Food Science and Nutrition major prepares students for employment or advanced study in one of several professions in the broad area of foods and nutrition. To complete degree requirements, students must complete the required core courses listed below. Students must also complete courses listed in their chosen specialization.

In addition to Department requirements listed above, students must successfully complete MATH 100.1, Intermediate Algebra, or equivalent, before being admitted to the major. Students must consult with a major advisor for approval of the program specialization.

Students are highly encouraged to complete at least five credits of FCSG 490, Cooperative Education.

Food Science and Nutrition Core Requirements	Credits
FCSN 140, Introduction to Foods	2
FCSN 140LAB, Introduction to Foods Laboratory	2
FCSN 245, Basic Nutrition	5
FCSN 345, Developmental Nutrition	3
FCSN 446, Sports Nutrition and Weight Control	3
FCSN 447, Nutrition and Society	3
EDCS 312, Educational Statistics OR PSY 362, Introductory Statistics	4

**Food Science and Nutrition
Core Total 22**

Select one of the following specializations:

**Nutrition and Dietetics
Specialization (3467)**

The Nutrition and Dietetics specialization fulfills the requirements of the American Dietetic Association for a Didactic Program in Dietetics (DPD). The DPD is currently granted developmental accreditation status by the American Dietetic Association Commission on Accreditation for Dietetics Education (CADE), a specialized accrediting body recognized by the Council on Post-secondary Accreditation and the United States Department of Education. Completion of this program qualifies the student to apply for admission to a CADE Accredited Supervised Practice Experience. Following this the student is eligible to sit for the registration examination. Passing the registration exam qualifies the graduate to become a Registered Dietitian (R.D.).

Required Courses	Credits
FSN Core Requirements	22
BIOL 220, Introductory Cellular Biology	5
BIOL 323, Microbiology	5
OR BIOL 322, Intro to Microbiology	
CHEM 111, Introduction to Chemistry	4
CHEM 111LAB, Chemistry Laboratory	1
CHEM 112, Introduction to Organic Chemistry	4
CHEM 112LAB, Chemistry Laboratory	1
CHEM 113, Introduction to Biochemistry	4
CHEM 113LAB, Chemistry Laboratory	1
ENG 310, Technical Writing	4
FCSE 421, Adult Education	3
FCSN 240, Quantity Food Production and Service	4
FCSN 240LAB, Quantity Food Production and Service Laboratory	1
FCSN 340, Management of Food Resources .	2
FCSN 340LAB, Management of Food Resources Laboratory	1
FCSN 341, Nutrition I	3
FCSN 348, Nutrition Interview	1

FCSN 440, Experimental Foods	3
FCSN 440LAB, Experimental Foods Laboratory	2
FCSN 441, Nutrition and Aging	3
FCSN 442, Nutrition Assessment Laboratory	2
FCSN 443, Nutrition II	5
FCSN 444, Medical Nutrition Therapy	5
FCSN 448, Food Service Systems Management	4
MGT 380, Organizational Management	5
BIOL 201, Human Physiology	5

Total 100

In addition to the above major requirements, The American Dietetic Association requires competence which may be satisfied by the following three courses: ANTH 130, Introduction to Cultural Anthropology (5) OR ANTH 357, Medical Anthropology: Cross-Cultural Perspectives on Health and Healing (4), and ECON 101, Economic Issues (5), and PSY 101, General Psychology (5). These courses may also meet breadth requirements at Central Washington University.

The requirement for CHEM 111, 111LAB, Introduction to Chemistry and Laboratory, may be met by satisfactorily completing CHEM 181, 181LAB and 182, 182LAB, General Chemistry and Laboratory. The requirement for CHEM 112, 112LAB, Introduction to Organic Chemistry and Laboratory, may be met by satisfactorily completing CHEM 361, 361LAB, 362, Organic Chemistry and Laboratory. The requirement for CHEM 113, 113LAB, Introduction to Biochemistry, may be met by satisfactorily completing CHEM 431, 431LAB and 432, Biochemistry and Laboratory. The requirement for BIOL 201, Human Physiology, may be met by satisfactorily completing BIOL 355, 356, Human Anatomy and Physiology.

**Nutrition Science Specialization
(3470)**

The Nutrition Science specialization provides the training necessary to pursue advanced study in nutrition leading towards a career in nutrition research. This option also can be used for those students seeking admission to medical schools. In addition to the courses listed, a year of introductory physics is also required for admission to most medical schools. Pre-medical students should also maintain contact with the pre-medical advisor for current information. MATH 153, Pre-Calculus Mathematics I, or an equivalent course needs to be completed before a student is admitted to this specialization.

Required Courses	Credits
FSN Core Requirements	22
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology	5

BIOL 112, Animal Biology.....	5
BIOL 220, Cellular Biology.....	5
CHEM 181, General Chemistry.....	4
CHEM 181LAB, General Chemistry Laboratory.....	1
CHEM 182, General Chemistry.....	4
CHEM 182LAB, General Chemistry Laboratory.....	1
CHEM 183, General Chemistry.....	4
CHEM 183LAB, General Chemistry Laboratory.....	1
CHEM 361, Organic Chemistry.....	3
CHEM 362, Organic Chemistry.....	3
CHEM 361LAB, Organic Chemistry Laboratory.....	2
CHEM 431, Biochemistry.....	3
CHEM431LAB, Biochemistry Laboratory.....	2
CHEM 432, Biochemistry.....	3
FCSN 341, Nutrition I.....	3
FCSN 440, Experimental Foods.....	3
FCSN 440LAB, Experimental Foods Laboratory.....	2
FCSN 442, Nutrition Assessment Laboratory.....	2
FCSN 443, Nutrition II.....	5
FCSN 444, Medical Nutrition Therapy.....	5
MATH 154, Pre-Calculus II.....	5
MATH 172, Calculus.....	5
BIOL 355, Human Anatomy and Physiology.....	5
BIOL 356, Human Anatomy and Physiology.....	5
Total	113

**Food Service Management
Specialization (3469)**

The Food Service Management specialization is designed for those interested in obtaining skills in managing a food service such as a university dining facility, a hospital, a public school food service, or a restaurant.

Required Courses	Credits
FSN Core Requirements.....	22
ACCT 301, Financial Accounting Analysis... OR ACCT 251, Accounting I.....	5
IT 101, Computer Applications.....	3
ADMG 385, Business Communications and Report Writing.....	5
MKT 360, Principles of Marketing.....	5
MGT 380, Organizational Development.....	5
HRM 381, Management of Human Resources	5
ECON 201, Principles of Economics Micro...	5
FCSN 240, Quantity Food Production and Service.....	4
FCSN 240LAB, Quantity Food Production and Service Laboratory.....	1
FCSN 340, Management of Food Resources..	2

FCSN 340LAB, Management of Food Resources Laboratory.....	1
FCSN 448, Food Service Systems Management.....	4
Department approved electives.....	10
Total	77

**Family and Consumer Sciences
Vocational Teaching Major
(3365)**

This major satisfies the endorsement for Family and Consumer Science Education. Students wishing to obtain a teaching certificate in Family and Consumer Sciences Education will be required to complete one of the Professional Education program options, the Family and Consumer Sciences Vocational Teaching Major, student teach in a vocationally approved program, hold a valid first aid card with CPR, complete 2,000 hours of paid work experience in the last six years, and provide documentation of occupational safety.

Required Courses	Credits
FCSG 205, FCS Entry Assessment.....	1
FCSG 405, FCS Exit Assessment.....	1
FCSC 371, Consumer Awareness.....	3
FCSC 472, Life Management.....	5
FCSA 351, Socio-Cultural Aspects of Apparel	3
FCSA 355, Consumer Textiles.....	4
FCSF 231, Human Sexuality.....	4
FCSF 234, Introduction to Family Studies (4) OR FCSF 235, Relationships and Personal Development (3).....	3-4
FCSF 331, Child Development OR PSY 447, Psychology of Adolescence.....	3
FCSF 336, Parent Education and Guidance...	3
FCSN 140, Introduction to Foods.....	2
FCSN 140LAB, Introduction to Foods Lab...	2
FCSN 245, Basic Nutrition.....	5
FCSH 166, Applied Creativity.....	3
FCSH 367, Family Housing.....	3
FCSE 326, Curriculum and Evaluation in Vocational Family and Consumer Sciences	3
OCED 410, Vocational School to Work Program.....	4
FCSE 421, Adult Education.....	3
FCSE 422, Impact of ED Reform on Family and Consumer Sciences.....	2
FCSE 426, Methods and Materials of Teaching Family and Consumer Sciences...	3
Total	60-61

**Family and Consumer Sciences
Education Minor
(3365)**

This minor does not meet endorsement requirements to teach family and consumer sciences.

Required Courses	Credits
FCSF 234, Introduction to Family Studies....	4
FCSF 331, Child Development.....	3
FCSF 336, Parent Education and Guidance...	3
FCSA 351, Sociocultural Aspects of Apparel..	3
FCSN 245, Basic Nutrition.....	5
FCSC 371, Consumer Awareness.....	3
FCSE 426, Methods and Materials of Teaching Family and Consumer Sciences...	3
Total	24

**Family and Consumer Sciences
Minor (3366)**

In consultation with a faculty advisor, students select a minimum of 20 credits of coursework as appropriate to individual interests and professional goals. The planned course of study must have the signature of both the student and the faculty advisor before submission to the Department Chair for approval.

Nutrition Minor (5660)

This program is designed primarily for those individuals who wish for a more in-depth study of nutrition. This program is intended for use by students with majors in Fitness Management, Family Studies, Physical Education, Health Education, and Gerontology. This minor may also be of interest for students in Pre-Professional programs including Pre-Medicine, Pre-Dentistry, Pre-Veterinary, and Pre-Physical Therapy. Courses in this minor may also be used to satisfy requirements in other major programs.

Required Courses	Credits
FCSN 140, Introduction to Foods.....	2
FCSN 140LAB, Introduction to Foods Lab...	2
FCSN 245, Basic Nutrition.....	5
FCSN 340, Management of Food Resources..	2
FCSN 340LAB, Management of Food Resources Laboratory.....	1
FCSN 345, Developmental Nutrition.....	3
FCSN 446, Nutrition, Weight Control and Exercise.....	3
Department Approved Electives.....	4
FCSG 490, Contracted Field Experience (5)	

Total 22

Family and Consumer Sciences Courses / Family Studies Courses

FCSF formerly HOFB. Students may not receive credit for both.

FCSF 231. Human Sexuality (4). The biophysical, psychosocial and behavioral aspects of sexuality with emphasis on making responsible sexual decisions and promoting healthy relationships.

FCSF 234. Introduction to Family Studies (4). Origins and historical development of families; cultural variations, contemporary trends. Draws upon information and insight from numerous root disciplines to explore family structure and function.

FCSF 235. Relationships and Personal Development (3). Development of interpersonal relationships from initial encounters to stable commitments. Major focus on interaction patterns in intimate relationships. FCSF 235 and PSY 235 are equivalent courses. Students may not receive credit for both.

FCSF 298. Special Topics (1-6).

FCSF 331. Child Development (3). Developmental characteristics of children with emphasis from conception to eight years. Includes observation techniques. FCSF 331 and EDEC 331 are equivalent courses. Students may not receive credit for both.

FCSF 332. Theories in Child Development (4). Assists the student in formulating his or her own general assumptions about the nature of child development through study of various theoretical viewpoints and current issues. FCSF 332 and EDEC 332 are equivalent courses. Students may not receive credit for both.

FCSF 333. Culture and Marriage (4). The reciprocal relationships between the biophysical and cultural components in mating, nurturing and sexual access. Cross-cultural patterns in marriage. FCSF 333 and ANTH 333 are equivalent courses. Students may not receive credit for both.

FCSF 334. Family Problems and Mediation (4). Problems arising out of the interaction of family members. Mediation techniques, family policy, and theories and ethics in studying families.

FCSF 335. Divorce and Remarriage (3). Prerequisite, FCSF 234 or permission. Personal, family, and legal aspects of divorce and remarriage; historical antecedents and trends.

FCSF 336. Parent Education and Guidance (3). Prerequisite, FCSF 234 or permission. Study of parent education models and methods of teaching parent education in community and school settings.

FCSF 398. Special Topics (1-6).

FCSF 430. Principles and Practices of Caregiving (3). Prerequisite, six credits of family studies or permission. An

examination of developmental characteristics and needs of individuals across the life cycle as they relate to both familial and non-familial caregiving. FCSF 430 and EDEC 430 are equivalent courses. Students may not receive credit for both.

FCSF 431. Principles of Sexuality Education (3). Prerequisite, FCSF 231 or permission. Principles and content for sex education in school and community settings.

FCSF 433. Family Life Education (4). Prerequisite, FCSF 234 or permission. The broad objectives, trends, methods and materials of family life education programs in various settings.

FCSF 434. Ethnic Diversity in Families (3). Prerequisite, FCSF 234 or permission. A review of American families from a comparative perspective. Examination of similarities and differences across ethnic groups based on national, cultural, religious and racial identification.

FCSF 435. Family Gerontology (4). Prerequisite, FCSF 234 or permission. A review of the research literature on families in later life, focusing on family interactions and building family strengths.

FCSF 439. Families and Public Policy (3). Prerequisite FCSF 334 or permission. Impact of governmental policies on families; policy implications of changes in the structure and composition of families.

FCSF 490. Cooperative Education (1-12). Prerequisite: by permission of department chair. A contracted field experience with business, industry, government, or social service agency. Requires a cooperative learning agreement. May be repeated for a total of 20 credits.

FCSF 491. Workshop (1-6).

FCSF 498. Special Topics (1-6).

FCSF 499. Seminar (1-5).

Consumer Management Courses

FCSC formerly HOCM. Students may not receive credit for both.

FCSC 298. Special Topics (1-6).

FCSC 371. Consumer Awareness (3). Consumer aids, protection, and information; problems of quality and quantity. Consumer decisions, how consumption influences the market.

FCSC 398. Special Topics (1-6).

FCSC 472. Life Management (5). Study of family in human ecosystem. Emphasis on physiological and psychological well-being and management of resources. Solve practical family problems.

FCSC 491. Workshop (1-6).

FCSC 498. Special Topics (1-6).

FCSC 499. Seminar (1-5). May be repeated.

Food and Nutrition Courses

FCSN formerly HOFN. Students may not receive credit for both.

FCSN 140. Introduction to Foods (2). Examination of scientific principles of food preparation, function of ingredients, effects of preparation techniques, and nutritional considerations. Two hours lecture per week.

FCSN 140LAB. Introduction to Foods Laboratory (2). Corequisite, FCSN 140. \$20 materials fee. Fours per week.

FCSN 240. Quantity Food Production and Service (4). Prerequisite, FCSN 140. Principles and techniques of food production and food safety for restaurants, health care facilities and other institutions. Corequisite, FCSN 240LAB.

FCSN 240LAB Quantity Food Production and Service Laboratory (1). Corequisite, FCSN 240.

FCSN 245. Basic Nutrition (5). Fundamental nutritional concepts as related to health. Four hours lecture and one hour discussion per week.

FCSN 298. Special Topics (1-6).

FCSN 340. Management of Food Resources (2). Prerequisites, FCSN 140 and FCSN 245. Food management principles involved in the planning, purchasing, preparing and serving of meals in relation to nutritional needs, social needs, food preferences and resources.

FCSN 340LAB. Management of Food Resources Laboratory (1). Corequisite FCSN 340. Demonstration of food management principles. \$20 materials fee.

FCSN 341. Nutrition I (3). Prerequisite CHEM 112 or CHEM 362. Nutritional aspects of carbohydrates, proteins, lipids, water and energy.

FCSN 345. Developmental Nutrition (3). Prerequisite, FCSN 245 or FCSN 341. Effects of nutrition on development, growth and health, from conception through aging.

FCSN 346. Theory and Treatment of Eating Disorders (3). Prerequisite, FCSN 245. Introduction of the dangers of dieting and the socio-cultural influences towards eating disorders and identification of the history, theory, and treatment of eating disorders.

FCSN 348. Nutrition Interview (1). Prerequisite, FCSN 245. Techniques, procedures and skills related to nutrition interviewing and counseling.

FCSN 398. Special Topics (1-6).

FCSN 405. Hospitality Catering (3). Basics of off premise catering including menu planning, budgeting, logistics and marketing. FCSN 405, RT 405, and RT 505 are equivalent courses. Students may not receive credit for more than one.

FCSN 406. Peer Nutrition Education Practicum (1). Prerequisites: FCSN 235, FCSN 348, FCSN 446 or by permission. Supervised experience as a nutrition educator at the Student Health Center and/or CWU Center for Sports Nutrition. May be repeated.

FCSN 440. Experimental Foods (3). Prerequisite, FCSN 140, FCSN 340, CHEM 112, PSY 362, and ENG 310. Physical and chemical bases of food preparation. Experiment testing result of variation in ingredients and manipulative practice. Corequisite, FCSN 440LAB.

FCSN 440LAB. Experimental Foods Laboratory (2). Corequisite, FCSN 440. \$20 materials fee.

FCSN 441. Nutrition and Aging (3). Prerequisite, FCSN 245. This course will focus on how aging affects nutritional status and the unique needs of the older adult.

FCSN 442. Nutrition Assessment Laboratory (2). Prerequisite FCSN 443 (can be taken concurrently). Current tools for nutritional assessment with laboratory experience. One hour lecture and two hours laboratory per week.

FCSN 443. Nutrition II (5). Prerequisites, FCSN 341, CHEM 113 or CHEM 372, BIOL 201 or BIOL 356 or permission. Effect of nutritional and physiological state on the regulation of carbohydrate, lipid, and protein metabolism. Metabolic and physiological role of vitamins and minerals.

FCSN 444. Medical Nutrition Therapy (5). Prerequisites, FCSN 443, BIOL 201 or BIOL 356, CHEM 113 or CHEM 372. Influence of nutritional deficiency on physiological problems; disease and medical nutritional therapy; nutrition and health management.

FCSN 445. Problems of Human Nutrition (3). Prerequisite, FCSN 245 or FCSN 341. Advanced study of normal nutrition; relationship of nutrition to disease.

FCSN 446. Sports Nutrition and Weight Control (3). Prerequisite, FCSN 245 or permission. Study of interrelationship of factors required for successful weight control; modification of diet, activity and behavior. Role of dietary factors in health and body function. FCSN 446 and EXSC 446 are equivalent courses. Students may not receive credit for both.

FCSN 447. Nutrition and Society (3). Prerequisite, FCSN 245 or FCSN 341. National and international nutritional problems and programs.

FCSN 448. Food Service Systems Management (4). Prerequisites, FCSN 140, FCSN 240 and MGT 380. Application of organizational management and principles to food-service systems including organizing, staffing, controlling, planning, marketing and leading.

FCSN 491. Workshop (1-6).

FCSN 492A Dietetic Practicum (10-18). Dietetic Internship Experience. May not be repeated. Credits may not be used to apply to the Master's degree. Grade will be S or U. Permission required.

FCSN 492B Dietetic Practicum (10-18). Dietetic Internship Experience. May not be repeated. Prerequisite, successful completion of 492A. Credits may not be used to apply to the Master's degree. Grade will be S or U. Permission required.

FCSN 492C Dietetic Practicum (10-18). Dietetic Internship Experience. May not be repeated. Prerequisites, successful completion of 492A and 492B. Credits may not be used to apply to the Master's degree. Grade will be S or U. Permission required.

FCSN 498. Special Topics (1-6).

FCSN 499. Seminar (1-5). May be repeated.

Fashion Merchandising and Textiles Courses

FCSA formerly HOCT. Students may not receive credit for both.

FCSA 181. Fashion Show Production (1). Preparation, production, and evaluation of special fashion related events. Professional learning experiences will include modeling techniques, organization and directing procedures. Class may be repeated up to 3 credits. Grade will be S or U.

FCSA 251. Visual Merchandising (3). Prerequisite FCSH 166, ADMG 201. Organization, planning, preparation and arrangement of effective visual merchandise sales presentation. One hour lecture and four hours lab per week. FCSA 251 and ME 251 are equivalent courses. Students may not receive credit for both.

FCSA 280. Basic Sewing Techniques (3). Basic clothing construction theory, techniques and teaching methods covering basic garment components: collars, sleeves, bodices, pleats, etc. All work is executed in full scale samples. Five hours laboratory per week. Formerly HOCT 250. Students may not receive credit for both.

FCSA 298. Special Topics (1-6).

FCSA 301. Principles of Fashion Merchandising (4). The development of the fashion industry; historical, economic and technological influences; apparel manufacturing, product development, fashion styles and markets. Formerly ME/FCSA 180. FCSA 301 and ME 301 are equivalent courses. Students may not receive credit for both.

FCSA 351. Sociocultural Aspects of Apparel (3). Recommended, PSY 101, SOC 107, and ANTH 107. The influence of cultural ideals and standards on dress. Clothing in relation to individual and group behavior patterns; personal and social meanings attributed to dress; and cultural patterns of technology, aesthetics, ritual, morality, and symbolism.

FCSA 353. Apparel Evaluation (3). Prerequisites, FCSA 280 and FCSA 355. A visual analysis and examination of ready-to-wear garments; a study of apparel quality relative to product performance, mass production principles and consumer value.

FCSA 355. Consumer Textiles (4). Prerequisite: a physical science with a lab. Study of natural and synthetic textiles: generic classification, fiber-forming substances, morphology, fabrication, finishing and dyeing processes, properties and performances. \$10 material fee. Three-and-one-half hours lecture and one hour laboratory per week.

FCSA 379. Internship Planning (1-5). FCSA 379 and ME 379 are equivalent courses. Formerly HOCT 399.1. Students may not receive credit for more than one.

FCSA 389. Fashion Trend Analysis (4). Prerequisite, ME/FCSA 301 and FCSH 166. Fashion forecasting; reflecting the acceptance or rejection of trends; analysis of socioeconomic, demographic, media, and fashion influences. Students will have an opportunity to travel to market.

FCSA 398. Special Topics (1-6).

FCSA 452. History of Fashion (5). Historical changes in fashion and costume design from Egyptian period through Eastern civilization to present. Social, political and religious influences on fashions. FCSA 452 and TH 452 are equivalent courses. Students may not receive credit for both.

FCSA 485. International Merchandising (4). Prerequisite, ME 330. Emphasis on international retailing and global trade. Focus on cross-cultural differences, work environments, policies and regulations. FCSA 485 and ME 485 are equivalent courses. Students may not receive credit for both.

FCSA 489. Retail Buying (4). Prerequisites ME 330. Principles of buying and selling merchandising; analysis of consumer demand, stock inventories and open-to-buy. FCSA 489 and ME 489 are equivalent courses. Students may not receive credit for both.

FCSA 491. Workshop (1-6).

FCSA 498. Special Topics (1-6).

FCSA 499. Seminar (1-5).

Interior Design Courses

FCSH formerly HOHI. Students may not receive credit for both.

FCSH 166. Applied Creativity (3). The creative process; blocks to creativity, creative problem solving, principles and elements of design in housing and interiors.

FCSH 265. Interior Design Fundamentals (4). Prerequisite, FCSH 166. The design process, space planning, color analysis, evaluating existing spaces, style trends and scale drawings.

FCSH 298. Special Topics (1-6).

FCSH 366. History of Housing and Furniture I (3). Survey of historic interiors, cabinet-makers, decorative arts, furniture from the antiquity to the middle of the 1700's.

FCSH 367. Family Housing (3). An evaluative study of the design, quality and cost of housing environment.

FCSH 392. Housing Practicum (6-12). Prerequisites, FCSH 265. Work study experience in various aspects of the housing profession. May be repeated to a limit of 9 credits at each level. FCSH 392 and FCSH 492 are equivalent courses.

FCSH 398. Special Topics (1-6).

FCSH 460. Advanced Textiles and Materials (3). Prerequisite, FCSH 265 and FCSA 355. Students evaluate and apply the appropriate use of textiles for design projects. Creative work with interior design materials.

FCSH 465. History of Housing and Furniture II (3). Survey of historic interiors, cabinet-makers, decorative arts, furniture from the late 1700's to the present.

FCSH 466. Housing Issues (4). Cultural factors and social responsibility in housing; evaluating special needs in space planning; economic/environmental issues in family and group housing.

FCSH 467. Furnishings (5). The different manufacturing and marketing processes of furniture will be explored. Underlying concepts and preparations of documents used by designers for furniture purchases and resale.

FCSH 480. Kitchen Design (4). Prerequisite: FCSH 392. Fundamental skills and knowledge are applied to a design problem related to functional, structural and aesthetic qualities of interior environments, specifically residential kitchen design.

FCSH 485. Residential Lighting (4). Prerequisite: FCSH 392 and acceptance into the major. Students will be introduced to the lighting and electrical systems that affect the interior environment, and acquire a working knowledge of architectural lighting planning and electrical drawings.

FCSH 491. Workshop (1-6).

FCSH 492. Housing Practicum (6-12). Prerequisites, FCSH 265. A work study course including practical experience in a phase of housing of the student's choice, accompanied with a seminar. FCSH 492 and FCSH 392 are equivalent courses.

FCSH 498. Special Topics (1-6).

FCSH 499. Seminar (1-5).

Family and Consumer Sciences Education Courses

FCSE formerly HOEE. Students may not receive credit for both.

FCSE 298. Special Topics (1-6).

FCSE 326. Curriculum and Evaluation in Vocational Family and Consumer Sciences (3). Instructional organization and classroom procedure in Vocational Family and Consumer Sciences programs. Formerly FCSE 425. Students may not receive credit for both.

FCSE 398. Special Topics (1-6).

FCSE 421. Adult Education (3). Prerequisite, permission of instructor. Introduction to working with adults as students, from theory to application. Program planning, implementation, and evaluation, including use of advisory groups.

FCSE 422. Impact of Education Reform on FCS (2). Prerequisite FCSE 326. Student will use program of study content knowledge to improve a community situation.

FCSE 426. Methods and Materials of Teaching Family and Consumer Sciences (3). Prerequisites, FCSE 326 and EDCS 311. Application of the philosophy, purposes, teaching techniques, and assessment of family and consumer sciences programs in the secondary schools. Formerly FCSE 325. Students may not receive credit for both.

FCSE 491. Workshop (1-6).

FCSE 498. Special Topics (1-6).

FCSE 499. Seminar (1-5).

General Courses

FCSG formerly HOEC. Students may not receive credit for both.

FCSG 205. FCS Entry Assessment (1). This course consists of self-assessment and assessment by the faculty of writing skills, speaking skills, visual/graphic skills, and knowledge of theory and research.

FCSG 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

FCSG 305. Family and Consumer Sciences Student Leadership (1). Prerequisites, advisor recommendation, chair permission. Students engage in leadership development through identifying, organizing, conducting

and assessing course activities. Elective credit for major. May be repeated for credit up to 6 credits. Grade will be S or U.

FCSG 405. FCS Exit Assessment (1). Prerequisite, FCSG 205. During last quarter of their program, students are assessed on writing skills, speaking skills, visual/graphic skills, and knowledge of theory and research. Grade will be S or U.

FCSG 490. Cooperative Education (5-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Fashion Merchandising Internship: Prerequisite, FCSA/ME 379. Available summer only - 10 credit minimum. FCSG 490 and ME 490 are equivalent courses. Students may not receive credit for both.

FCSG 492. Teaching Experience in Family and Consumer Sciences (2). Prerequisite, permission of instructor. Supervised teaching experience in a specific area of Family and Consumer Sciences. May be repeated.

FCSG 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

Undergraduate Courses/ Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: FCSA 150. Clothing Construction I (3); FCSA 380. Pattern Drafting (4); FCSA 383. Problem Fabric in Clothing Construction (3); FCSA 384. Fitting Analysis (2); FCSA 386. Dress Design by Draping (4); FCSA 387 Tailoring (3); FCSA 388. Advanced Pattern Drafting (4); FCSA 482. Computer Pattern Making (2); FCSA 484. Advanced Tailoring (3); FCSA 486. Pattern Engineering (5); FCSA 487. Couture Apparel Techniques (3); FCSA 488. Fashion Design Portfolio (5); FCSF 432. Child Development Research (3).

FASHION MERCHANDISING

Contact Vicki Shaffer-White, Family and Consumer Sciences, Michaelsen 327, or Bill Chandler, Information Technology and Administrative Management, Shaw Smyser 234.

General Information

Fashion Merchandising is an interdepartmental major leading to a Bachelor of Science degree. It is administered jointly by the Department of Family and Consumer Sciences, and the Department of Information Technology and Administrative Management. The curriculum provides the necessary skills to work in the fashion merchandising field as a fashion buyer, a fashion retailer, or a fashion merchandise manager.

Courses are primarily selected from Administrative Management, Marketing Education, Information Technology, and Family and Consumer Sciences, providing information relating to the production, distribution, and consumption of clothing and textiles. Students will gain practical work experience in agencies which deal with fashion merchandise during summer quarter internships.

Students enrolled in the major are required to consult regularly with a faculty advisor. All prerequisites must be fulfilled except in cases of special permission.

For additional information please see either the Information Technology and Administrative Management or Family and Consumer Sciences Department Chairs.

Admission Policy

1. The major application form must be completed, then signed by a department advisor and Chair.
2. Students must have a university-level cumulative GPA of at least 2.3 for full admission to a departmental major.

Bachelor of Science

Fashion Merchandising Major (3425)

Required Courses	Credits
ADMG 146, Basic Accounting	5
FCSH 166, Applied Creativity	3
ADMG 201, Introduction to Business	3
ADMG 271, Business Math Applications	4
ADMG 385, Business Communications and Report Writing	5
ECON 101, Economic Issues OR ECON 201, Micro/Econ 202 Macro	5
FCSA 280, Basic Sewing Techniques	3

FCSA/ME 301, Principles of Fashion Merchandising	4
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 350, Principles of Advertising	4
FCSA 351, Sociocultural Aspects of Dress	3
FCSA 353, Apparel Evaluation	3
FCSA 355, Consumer Textiles	4
FCSA/ME 379, Internship Planning	1
FCSA 389, Fashion Trend Analysis	4
FCSA 452, History of Fashion	5
FCSA/ME 485, International Merchandising	4
FCSA/ME 489, Retail Buying	4
FCSG/ME 490, Cooperative Education (Summer Only)	9-12
ME 467, Retail Management	4
Electives:	3-6
ADMG 310, Business Professional Development (3)	
COM 110, Oral Communications Skills (3)	
COM 208, Beginning Newswriting and Reporting (4)	
FCSA 181, Fashion Show Production (1)	
FCSA/ME 251, Visual Merchandising (3)	
HRM 381, Management of Human Resources (5)	
IT 204, Word Processing Applications (3)	
IT 248, Web Fundamentals (2)	
IT 258, Spreadsheet Applications (3)	
IT 288, Business Presentation Applications (2)	
ME 461, Advertising and Sales Promotion (5)	
MKT 360, Principles of Marketing (5)	
MKT 469, Marketing Research (5)	
FCSG 305 Leadership (1)	
UNIV 309, Service Learning (2)	

Total 91

Fashion Merchandising Minor (3425)

Required Courses	Credits
FCSH 166, Applied Creativity	3
ADMG 201, Introduction to Business	3
FCSA 280, Basic Sewing Techniques	3
FCSA/ME 301, Principles of Fashion Merchandising	4
ME 340, Principles of Selling	4
FCSA 353, Apparel Evaluation	3
FCSA 355, Consumer Textiles	4
ME 467, Retail Management	4

Total 28

FLIGHT TECHNOLOGY

Flight Technology Center
807 Elmview Road

Faculty

Interim Chair: William Trippett

Associate Professors

Teresa Sloan
Dale Wilson

Assistant Professors

Amy Hoover
William Trippett

Lecturer

Autumn Cooper, Academic Advising

General Program Information

Students must apply for acceptance into the Flight Technology major. Application will be reviewed upon acceptance to CWU. Admission decisions are based on a number of factors including grade point average, SAT/ACT scores, financial capability, and a written statement of purpose, as outlined in the Flight Technology Application form.

Bachelor of Science

Flight Technology Major (3458) with Specialization

The Flight Technology major prepares students for careers in the aviation industry. Students select one of three technical specializations leading to a Bachelor of Science degree in Flight Technology. The curriculum in Flight Technology is designed to provide a solid foundation in the liberal arts as well as a thorough education and training in a technical discipline. All FLT courses are by permission. Prerequisites may be waived for students enrolled in the Aviation Management specialization or the Aviation Maintenance Management emphasis.

Pilot Specialization

The two emphases in the Pilot specialization are designed to prepare graduates for entry level careers and leadership roles in the aviation community. Special program rules and procedures as stated in the CWU Flight Technology/Midstate Aviation, Inc. Standard Operating Procedures (SOPs) apply to the Pilot specialization. A minor is required of students graduating with this specialization. The Pilot specialization offers two areas of emphasis:

Flight Officer
Commercial Pilot

The following core classes are required for ALL Pilot specialization majors.

Pilot Specialization Core Requirements	Credits
FLT 101, Private Pilot Flight Laboratory I	1
FLT 102, Private Pilot Flight Laboratory II	1
FLT 103, Private Pilot Flight Laboratory III	1
FLT 130, Introduction to Aviation	1
FLT 141, Principles of Flight I	4
FLT 142, Principles of Flight II	4
FLT 201, Instrument Pilot Flight Laboratory I	1
FLT 202, Instrument Pilot Flight Laboratory II	1
FLT 203, Instrument Pilot Flight Laboratory III	1
FLT 211, Meteorology for Pilots	4
FLT 221, Aircraft Systems I	4
FLT 232, History of Aviation	2
FLT 241, Instrument Flight I	3
FLT 242, Instrument Flight II	2
FLT 304, Commercial Pilot Flight Laboratory I	1
FLT 305, Commercial Pilot Flight Laboratory II	1
FLT 306, Commercial Pilot Flight Laboratory III	1
FLT 312, Aviation Weather Services	3
FLT 319, Applied Aerodynamics for Pilots	3
FLT 322, Aircraft Systems II	3
FLT 337, Aviation Physiology and Survival	3
FLT 354, Commercial Pilot	4
FLT 417, Aviation Safety Management	3

Pilot Specialization Core Total 52

In addition to the core requirements, students will select and complete one of the areas of emphasis. It is essential that students selecting the Pilot specialization consult a department advisor early in their freshman year to plan an efficient schedule. Failure to do so will require additional time to complete degree requirements.

Flight Officer Emphasis (3463)

Completion of this emphasis assists the student to prepare for professional pilot positions. A minor is required of students graduating with this emphasis. The following certificates and ratings are required for graduation: Private Pilot Certificate, Instrument Rating, Commercial Pilot Certificate, Certified Flight Instructor, and Multiengine Rating. Flight training fees are paid by the student and will be in addition to normal university tuition and fees. Students enrolled in the Flight Officer emphasis are eligible to complete advanced multiengine

simulator training and may qualify for approved airline internships, and after graduation, the Direct Hire program with Horizon Airlines. To graduate with this emphasis, students must complete the Commercial Pilot Certificate*, Multiengine Rating and Certified Flight Instructor Certificate at Central Washington University's approved flight training operator at Bowers Field in Ellensburg, Washington. Once a student has enrolled at Central Washington University, all subsequent flight training must be conducted by Central Washington University's approved flight training operator at Bowers Field in Ellensburg, Washington, and shall be done in a manner approved by the FAA under FAR Part 141.

*except as provided in approved articulation agreements

Required Courses	Credits
Pilot Specialization core requirements	52
FLT 301, CFI Flight Laboratory	1
FLT 323, Advanced Navigation	2
FLT 333, Air Transportation	4
FLT 340, Human Factors in Flight	3
FLT 348, Air Carrier Operations	3
FLT 352, Multiengine Principles	2
FLT 358, Fundamentals of Flight Instruction	4
FLT 401, Multiengine Flight Laboratory	1
FLT 422, Aircraft Systems III	2
FLT 444, Multiengine Simulator, EFIS	2
FLT 445, Multiengine Simulator, Turboprop	2
FLT 489, Pilot Performance	1
Department approved FLT electives	10

Total 89

Commercial Pilot Emphasis (3450)

Completion of this emphasis assists the student to prepare for commercial aviation employment opportunities. A minor is required of students graduating with this emphasis. The following certificates and ratings are required for graduation: Private Pilot Certificate, Instrument Rating and Commercial Pilot Certificate. Flight training fees are paid by the student and will be in addition to normal university tuition and fees. Once a student has enrolled at Central Washington University, all subsequent flight training must be conducted by Central Washington University's approved flight training operator at Bowers Field in Ellensburg, Washington, and shall be done in a manner approved by the FAA under FAR Part 141.

Required Courses	Credits
Pilot Specialization core requirements	52
FLT 330, Aviation Law	3
FLT 335, Aviation Management	3

Department approved FLT electives	14
Department approved electives	11

Commercial Pilot Total 83

Aviation Management Specialization (3455)

Coursework in the Aviation Management specialization will prepare students for a variety of administrative and management positions in the aviation community. Management career options related to aviation activities, such as airport manager, general operations manager and air carrier management exist in the industry.

Required Courses	Credits
IT 101, Computer Applications	3
ADMG 385, Business Communications and Report Writing	5
IT 288, Business Presentation Applications	2
IT 389, Desktop Publishing	3
COM 345, Business and Professional Speaking	4
IET 160, Computer Aided Design	4
MATH 130, Finite Mathematics I	5
ACCT 301, Financial Accounting Analysis	5
ECON 201, Principles of Economics, Micro	5
FIN 370, Introductory Financial Management	5
HRM 381, Management of Human Resources	5
MGT 380, Organizational Management	5
MGT 481, Organizational Behavior	5
BUS 221, Introductory Business Statistics	5
POSC 320, Public Administration	5
FLT 141, Principles of Flight I	4
FLT 142, Principles of Flight II	4
FLT 330, Aviation Law	3
FLT 333, Air Transportation	4
FLT 335, Aviation Management	3
FLT 417, Aviation Safety Management	3
Department Approved Electives	21

Total 108

Airway Science Specialization

The areas of emphasis in the Airway Science specialization are designed to prepare graduates for entry level positions within the aviation industry or the Federal Aviation Administration. Airway Science offers a curriculum based upon a strong foundation in the liberal arts in addition to technical competence gained through one of two emphases. The curriculum is disciplined and structured to educate the future technical managers of government and the aviation industry. Basic and breadth requirements must

be carefully selected to meet graduation requirements. Graduation requirements exceed 180 credits. Airway Science offers two areas of emphasis:

- Aircraft Systems Management
- Aviation Maintenance Management

The following core courses are required of ALL Airway Science majors. In the absence of an appropriate math/science background, the student may find it necessary to take one or more of the following: MATH 153, MATH 154.

Airway Science Core Requirements	Credits
IT 101, Computer Applications	3
CS 110, Programming Fundamentals I	4
CS 111, Programming Fundamentals II OR Department approved CS elective	4
EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
FLT 141, Principles of Flight I	4
FLT 142, Principles of Flight II	4
FLT 330, Aviation Law	3
FLT 417, Aviation Safety Management	3
IET 160, Computer Aided Design OR Department approved CS elective	4
MATH 170, Intuitive Calculus OR MATH 172, Calculus	5
MGT 380, Organizational Management	5
MGT 481, Organizational Behavior	5
BUS 221, Introductory Business Statistics	5
PHYS 111, 111LAB, Introductory Physics	5
Department-approved upper division electives	6
(AWS Systems majors must take FLT 348)	

Airway Science Core Total 64

In addition to the core requirements, students will select and complete one of the areas of emphasis. It is essential that students selecting the Airway Science specialization consult a department advisor early in their freshman year to plan an efficient schedule. Failure to do so will require additional time to complete degree requirements.

Aircraft Systems Management Emphasis (3460)

This emphasis focuses on aircraft flight operations. Students must obtain the following ratings prior to graduation: Private Pilot Certificate, Instrument Rating, Commercial Pilot Certificate Airplane, Single and Multiengine Land; Certified Flight Instructor, Airplane and Instrument. Flight training fees are paid by the student and will be in addition to normal university tuition and fees. Students enrolled in the Aircraft Systems Management Emphasis are eligible to complete advanced multiengine simulator training and may qualify for approved airline internships, and

after graduation, the Direct Hire program with Horizon Airlines. To graduate with this emphasis, students must complete the Commercial Pilot Certificate*, Multiengine Rating and Certified Flight Instructor Certificates at Central Washington University's approved flight training operator at Bowers Field in Ellensburg, Washington. Once a student has enrolled at Central Washington University, all subsequent flight training must be conducted by Central Washington University's approved flight training operator at Bowers Field in Ellensburg, Washington., and shall be done in a manner approved by the FAA under FAR Part 141.

*except as provided in approved articulation agreements

Required Courses	Credits
Airway Science Core Requirements	64
FLT 211, Meteorology for Pilots	4
FLT 221, Aircraft Systems I	4
FLT 241, Instrument Flight I	3
FLT 242, Instrument Flight II	2
FLT 312, Aviation Weather Services	3
FLT 319, Applied Aerodynamics for Pilots.	3
FLT 322, Aircraft Systems II	3
FLT 333, Air Transportation	4
FLT 354, Commercial Pilot	4
FLT 358, Fundamentals of Flight Inst.	4
FLT 423, Aircraft Systems IV.	3
FLT 444, Multiengine Simulator, EFIS.	2
FLT 445, Multiengine Simulator, Turboprop	2
FLT 458, Advanced Flight Instruction, Instrument	2
FLT 489, Pilot Performance	1
Department-approved upper division electives	15

Total 123

Aviation Maintenance Management Emphasis (3461)

Students enrolling in the Aviation Maintenance Management emphasis who already possess an Airframe and Powerplant Certificate* from a Federal Aviation Administration approved Part 147 school receive in depth coverage of both theoretical and practical. This emphasis prepares students for an administrative or management position associated with aviation maintenance. Opportunities exist both in government and the private sectors of aviation.

NOTE: Sixty upper division credits are required for graduation. Without careful planning, one could be deficient in this requirement.

Required Courses	Credits
Airway Science Core Requirements	64
*Airframe and Powerplant Certificate.	45

CHEM 101, Contemporary Chemistry	5
Department approved upper division FLT electives	10

Total 124

*Certificate not offered at Central Washington University. Forty-five credits of the Airframe and Powerplant Certificate will be accepted upon completion of all other degree requirements. See program advisor.

Flight Technology Minor (3458)

A program designed for students who wish to earn a pilot's license (Private Pilot certificate). Private Pilot flight training is taken through CWU's approved flight training operator at Bowers Field in Ellensburg, Washington.

Required Courses	Credits
FLT 101, Private Pilot Flight Lab I	1
FLT 102, Private Pilot Flight Lab II	1
FLT 103, Private Pilot Flight Lab III.	1
FLT 141, Principles of Flight I	4
FLT 142, Principles of Flight II	4
FLT 211, Meteorology for Pilots	4
FLT 221, Aircraft Systems I	4
Department approved FLT electives	6

Total 25

Flight Technology Courses

- FLT 101. Private Pilot Flight Laboratory I (1).** Corequisite, FLT 141. Basic flight maneuvers, solo flight in local area, and introduction of maximum performance takeoff and landing procedures.
- FLT 102. Private Pilot Flight Laboratory II (1).** Prerequisite, FLT 101, corequisite, FLT 142. Plan and conduct cross-country flights and perform short-field and soft-field takeoffs and landings.
- FLT 103. Private Pilot Flight Laboratory III (1).** Prerequisite, FLT 102. Perform private pilot operation at a standard to obtain the private pilot certificate.
- FLT 130. Introduction to Aviation (1).** An overview of the aviation program, industry, career options and opportunities. Grade will be S or U.
- FLT 141. Principles of Flight I (4).** Corequisite, FLT 221. Basic knowledge of airplanes and their systems, aerodynamics, flight safety, airports, aeronautical charts, airspace, radio communications, air traffic control services, and aviation regulations. Formerly FLT 151/FLT 151.1. Students may not receive credit for both.
- FLT 142. Principles of Flight II (4).** Prerequisite, FLT 141. Corequisite FLT 211. Basic knowledge of airplane performance and

- loading, preflight planning including weather analysis, visual and radio (VOR/ADF) navigation, flight physiology, and aeronautical decision making. Preflight planning for cross-country flights. Formerly FLT 152/152.1. Students may not receive credit for both.
- FLT 201. Instrument Pilot Flight Laboratory I (1).** Prerequisite, Private Pilot Certificate. Attitude control by instrument reference only, use of full and partial panel, and radio navigation.
- FLT 202. Instrument Pilot Flight Laboratory II (1).** Prerequisite, FLT 201. IFR approaches and holding patterns.
- FLT 203. Instrument Flight Laboratory III (1).** Prerequisite, FLT 202. Perform all IFR maneuvers and procedures to FAA instrument rating practical test standards.
- FLT 211 Meteorology for Pilots (4).** Corequisite, FLT 142. Meteorological processes and weather hazards peculiar to the flight environment. Formerly FLT 210. Students may not receive credit for both.
- FLT 221 Aircraft Systems I (4).** Corequisite, FLT 141. Light training aircraft engines, propellers and engine systems, flight controls, fuel systems, instrumentation, tires, wheels and brakes. Formerly 220/220.1. Students may not receive credit for both.
- FLT 232. History of Aviation (2).** Prerequisite, ENG 101. A brief overview of the major developments in the history of powered flight. Formerly FLT 132. Students may not receive credit for both.
- FLT 241. Instrument Flight I (3).** Prerequisite, Private Pilot Certificate. Operation and use of flight instruments and instrument navigation, function of air traffic control, and use of instrument flight charts. Formerly FLT 252/252.1. Students may not receive credit for both.
- FLT 242. Instrument Flight II (2).** Prerequisite, FLT 241, corequisite, FLT 312. Procedures for IFR departure, enroute and arrival operations. Preparation for FAA written examination. Formerly FLT 252/252.1. Students may not receive credit for both.
- FLT 296. Individual Study (1-6).** Prerequisite, permission of instructor. May be repeated.
- FLT 298. Special Topics (1-5).**
- FLT 301. Certified Flight Instructor Laboratory (1).** Prerequisite, Commercial Pilot Certificate, FLT 358. Analyze and perform maneuvers from the right seat. Demonstrate proficiency and instructional knowledge to FAA practical test standards.
- FLT 304. Commercial Pilot Flight Laboratory I (1).** Prerequisite, FLT 203. Plan and conduct VFR cross-country flights using pilotage, dead reckoning, and radio navigation. Night flight operations. Formerly FLT 204. Student may not receive credit for both.
- FLT 305. Commercial Pilot Flight Laboratory II (1).** Prerequisite, FLT 304. Operation of complex aircraft and basic knowledge of advanced commercial maneuvers. Formerly FLT 205. Student may not receive credit for both.
- FLT 306. Commercial Pilot Flight Laboratory III (1).** Prerequisite, FLT 305. Perform flight maneuvers and procedures to FAA commercial pilot practical test standards. Formerly FLT 206. Student may not receive credit for both.
- FLT 312. Aviation Weather Services (3).** Corequisite FLT 242. Comprehensive analysis of weather service for flight crews, including interpretation of applicable alpha-numeric and graphic weather reports and forecasts. Formerly FLT 311, students may not receive credit for both.
- FLT 319. Applied Aerodynamics for Pilots (3).** Prerequisite, FLT 242. Theories of flight and flight factors including airfoil shape, drag, velocity, lift and thrust, stability and control.
- FLT 322. Aircraft Systems II (3).** Prerequisite, FLT 221 and Instrument Rating. Corequisite, FLT 354. Complex aircraft systems. Formerly FLT 320. Students may not receive credit for both.
- FLT 323. Advanced Navigation (2).** Prerequisite, FLT 354. Advanced navigation systems, their function, operation and application. Formerly FLT 321. Students may not receive credit for both.
- FLT 330. Aviation Law (3).** Prerequisite, Instrument Rating or junior standing. Basic understanding of aviation law, the legal system, the principles of law, and how they may be applied to aspects of air transportation.
- FLT 331. National Airspace System (3).** The national air traffic control system, control procedures, the integration of centers, approach communications, navigation procedures, radar operations, and facilities.
- FLT 333. Air Transportation (4).** Prerequisite, ENG 101. The air transportation system including facilities, regulations, problems encountered in commercial air transportation, airline operations, economic and social considerations.
- FLT 334. Airport Management (3).** Airport operations and management, including analysis of the role of the airport manager in planning, finance, and administration; public relations, social, political, and environmental considerations; operational requirements and facilities maintenance.
- FLT 335. Aviation Management (3).** Management of aviation activities, manpower, facilities, regulations, and flight operations.
- FLT 336. Air Cargo Operations (3).** Domestic and international air cargo operations, the air freight market, rates and tariffs, terminal facilities, competition and future prospects.
- FLT 337. Aviation Physiology and Survival (3).** Prerequisite, Private Pilot Certificate. Physiological aspects of flight crew performance, including effects of high altitude, accelerations, disorientation, and fatigue. Normally requires altitude chamber flight. Basic introduction to wilderness survival.
- FLT 339. International Air Transportation (3).** Current problems in international air transportation operations, regulations, law, and factors affecting globalization of this industry.
- FLT 340. Human Factors in Flight (3).** Prerequisite, Instrument Rating. Psychological aspects of flight crew performance and fundamental concepts of crew resource management.
- FLT 348. Air Carrier Operations (3).** Prerequisite, FLT 354. Dispatch procedures, weather analysis (real time), flight operations, and crew utilization. Formerly FLT 338. Students may not receive credit for both.
- FLT 352. Multiengine Principles (2).** Prerequisite, FLT 354. Multiengine aircraft systems and operations, normal and emergency procedures and flight characteristics.
- FLT 354. Commercial Pilot (4).** Corequisite FLT 322. Operation of advanced systems appropriate to complex airplanes and execution of advanced flight maneuvers. Preparation for FAA written examination. Formerly FLT 254 and 253. Students may not receive credit for both.
- FLT 358. Fundamentals of Flight Instruction (4).** Prerequisites, Instrument Rating and Commercial Pilot Certificate Course Stage V. Instructional knowledge to teach required subject matter to include recognition, analysis and correction of common student errors. Formerly FLT 357/357.1. Students may not receive credit for both.
- FLT 375. Mountain and Canyon Flying (2).** Prerequisites: FLT 141, FLT 142, FLT 211 or permission and private pilot license. Synthesis of fundamental concepts and practices including navigation in mountainous terrain, aircraft performance and density altitude, canyon flying and airport operations in constricted areas, mountain and canyon meteorology, emergencies, and flight safety. May be repeated to a total of 4 credits.

- FLT 401. Multiengine Flight Laboratory (1).** Prerequisites, FLT 352 and Commercial Pilot Certificate. Perform multiengine aircraft systems and operations, normal and emergency procedures to FAA practical test standards.
- FLT 417. Aviation Safety Management (3).** Prerequisite, Commercial Pilot Certificate Course Stage IV. Fundamentals of aviation safety management, including evaluation of specific hazards peculiar to the flight environment. Formerly FLT 317. Students may not receive credit for both.
- FLT 422. Aircraft Systems III (2).** Prerequisites, FLT 322 and FLT 354. Turbine engines and turboprop aircraft systems. Formerly FLT 420. Students may not receive credit for both.
- FLT 423. Aircraft Systems IV (3).** Prerequisite, FLT 422. Transport category aircraft systems. Formerly FLT 421. Students may not receive credit for both.
- FLT 431. Flight Simulator Instructor (2).** Prerequisite, FLT 358. Instruction of basic instrument flying using single and multiengine ground trainers.
- FLT 434. Airport Operations (3).** Prerequisites, FLT 333 and FLT 334.
- FLT 438. Planning and Design of Airports (4).** Prerequisite, FLT 434. Methodologies necessary to the planning and design of airports.
- FLT 444. Multiengine Simulator, EFIS (2).** Prerequisites, admission to the Flight Officer emphasis or the Aircraft Systems Management emphasis, FLT 352, and Commercial Pilot Certificate Course Stage V complete. Introduction to and familiarization of electronic flight instrument systems, use of flight director, and auto pilot. Beginning crew coordination.
- FLT 445. Multiengine Simulator, Turboprop (2).** Prerequisites; admission to the Flight Officer or the Aircraft Systems Management emphasis, FLT 422, FLT 444, and Multi engine Rating. Operation of turbine powered aircraft; CRM, and FMS.
- FLT 458. Advanced Flight Instruction, Instrument (2).** Prerequisite, FLT 358. Corequisite, Certified Flight Instructor Certificate Course Stage I. Methodology used in teaching instrument flight and acquisition of the Instrument Ground Instructor certificate (IGI).
- FLT 459. Advanced Flight Instruction, Multiengine (2).** Prerequisites, ME Rating and CFI certificate. Principles and methodology of teaching multiengine flight.
- FLT 475. Specialty Flight Laboratory (1).** Prerequisites, FAA Pilot Certificate or equivalent and permission. Instruction in the listed specialties. Flight hours will vary with specialty. A minimum of 12 flying

hours normally required for credit except as approved by Flight Technology. Hang gliders are specifically omitted. May be repeated.

- A. Single Engine Seaplane
- B. Multiengine Seaplane
- C. Helicopters
- D. Mountain Flying
- E. Aerobatics
- F. Other by advisement and permission

FLT 489 Pilot Performance (1). Prerequisites, FLT 445 and permission of instructor. Oral and skill demonstration in the simulator covering those areas required of graduates entering an aircraft pilot career. Formerly FLT 488. Students may not receive credit for both.

FLT 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

FLT 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

FLT 498. Special Topics (1-5).

FLT 499. Seminar. (1-5). May be repeated.

FOREIGN LANGUAGES

Faculty

Chair: Joshua Nelson
Language and Literature Building 102
Professors

Kelton W. Knight, French
 Natalie Lefkowitz, Spanish, Applied Linguistics
 Stella Moreno, Spanish
 Joshua Nelson, Japanese
 Rosco N. Tolman, Spanish

Associate Professors

Rodney Bransdorfer, Spanish, Applied Linguistics
 Dieter Rombo, German

Assistant Professors

A. Bret Cummins, American Sign Language
 Dinara Georgeoliani, Russian
 Nathalie Kasselis-Smith, Spanish
 Liuxi Meng, Chinese

General Departmental Information

The Department offers Bachelor of Arts degrees. Specializations and minors are available in Chinese, French, German, Japanese, Russian and Spanish. Students interested in teachers certification may complete a major or minor in the target language(s) listed above. Course offerings provide (1) an introduction to the nature of the language as a facet of culture; (2) an acquaintance with the literature and culture of the aforementioned languages; and (3) proficiency in speaking, comprehension and writing. A fully equipped computer language laboratory provides practice in skill building and proficiency through the use of language software programs.

For non-majors or minors, the first and second year sequences of the Foreign Languages Department are designed to provide basic proficiency in a foreign language, and the values of a liberal education. Such proficiency, combined with some other special knowledge or skill, can also lead to many exciting vocational opportunities.

The Department recommends that all majors include some organized study in a foreign country where their major language is spoken. Interested students are reminded that there are various study-abroad programs and exchanges administered by the Director of International Studies and Programs. Credit earned in programs abroad will normally count toward satisfaction of the major or minor requirements, but the student should see a foreign language advisor before enrolling in a study abroad program. Credit may also be given for special projects completed while traveling in a foreign country. For information on the requirements and types of projects acceptable, contact the Department. Foreign language majors and minors are encouraged to take courses in related disciplines. Please consult with a major advisor. For more information, visit our Web site at <http://www.cwu.edu/~forlang/forlanghome.html>

Admission to Department Programs

1. Students planning to major or minor in a foreign language must consult with an advisor in the Foreign Languages Department for details of admission requirements, a student handbook, and an application.
2. Potential majors must have a grade point average of at least 3.0 in 2nd-year courses in the language.
3. Potential minors must have a grade point average of at least 2.5 in 2nd-year courses in the language.
4. The Foreign Languages Department reserves the right to modify these requirements as the needs of the

Department change and any changes would supersede policies previously published in this catalog.

Departmental Standards

Students must earn a minimum grade of C- in each course allowed toward fulfilling the major and/or minor.

Departmental Honors

To earn honors in a foreign language, student must be a Foreign Languages major, at least a first quarter senior, have a GPA of 3.4 in the foreign language in question. Student must apply in writing to the Department Chair.

For details on honors and procedures, please see the Foreign Languages Student Handbook, available in the department office, or contact a member of the Foreign Languages faculty.

Bachelor of Arts

Foreign Language Major with Specialization

Chinese (3520)

French (3525)

German (3530)

Japanese (3535)

Russian (3540)

Spanish (3545)

Only courses numbered 200 and above will count toward a major or minor. For students with sufficient preparation, the 200 level sequence may be challenged. Students pursuing either a Foreign Language Major, or a Foreign Language: Teaching Major, in Chinese, French, German, Japanese or Russian, will be required to earn at least 20 transferable upper division credits in a study abroad program where the courses are taught in the target language. Those pursuing a Broad Area Major in the above-mentioned languages will be required to earn at least 35 such credits, and Broad Area Majors in Spanish will be required to earn 10. Students planning to study abroad must see their advisor prior to departure to ensure the applicability of the proposed course of study.

Foreign Language Major (3500)

This major requires a minor.

Required Courses	Credits
251, 252, 253, Second Year	15
301, Introduction to Literature	3
310, Civilization and Culture	3
Language electives	15
Literature/Culture electives	9

Total 45

Foreign Language Broad Area Major (3510)

This major does not require a minor. At least 10 credits must be earned abroad, in a country where the target language is spoken.

Required Courses	Credits
Completion of the Foreign Language Major courses	45
Electives in language and/or literature	15
Total	60

Foreign Language: Teaching Major (3505)

This major satisfies the endorsement for Designated World Language.

This major requires a minor and is open only to students pursuing a teaching certificate. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
251, 252, 253, Second Year	15
301, Introduction to Literature	3
310, Civilization and Culture	3
385, Phonetics	3
Language electives	12
Literature/Culture electives	9
FNLA 481, Methods	4
FNLA 482, Foreign Language Acquisition OR FNLA/ANTH 483, Sociolinguistics	4
FNLA 492, Practicum	1
Total	54

Foreign Language: Teaching Broad Area (3515)

This major satisfies the endorsement for Designated World Language.

This major does not require a minor and is open to students pursuing a teaching certificate. At least 10 credits must be earned abroad, in a country where the target language is spoken. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
Completion of the above Foreign Language: Teaching Major courses	54
Electives in language and/or literature	6
Total	60

Foreign Language Minor

Chinese (3520) **French (3525)**

German (3530) **Japanese (3535)**

Russian (3540) **Spanish (3545)**

Courses must be numbered 200 or above.

Required Courses	Credits
251, 252, 253	15
341	3
343 or 345	2
Electives	7

Total 27

Foreign Language: Teaching Minor

Chinese (3560) **French (3565)**

German (3570) **Japanese (3575)**

Russian (3580) **Spanish (3585)**

This minor satisfies the endorsement for Designated World Language.

This minor is open only to students pursuing a teaching certificate. Courses must be numbered 200 or above.

Required Courses	Credits
251, 252, 253	15
310	3
341	3
343 or 345	2
FNLA 481	4
Electives	4

Total 31

American Sign Language Courses

ASL 151, 152, 153. American Sign Language (5). Courses must be taken in sequence. Conversational approach with intensive visual/manual drill. Firm foundation in basic signs and structural principles of the language. Students may not receive credit for both ASL 151, 152, 153 and EDSE 427, 428, 429.

ASL 251, 252, 253. Second Year American Sign Language (5). Courses must be taken in sequence. Prerequisite, successful completion of ASL 153 or an equivalent course, demonstration of ASL 153 equivalent skills, or permission of the instructor. How signers construct meaning and messages in ASL, grammatical variation, and discourse strategies is covered with special focus on increasing non-manual behavior.

Foreign Language Courses

FNLA 111, 112, 113. Foreign Languages-Special Instruction (3 or 5). A foreign language not usually taught by the Department. Offerings vary according to

student demand, availability of staff, or of instructional programs. FNLA 111 or the sequence may be repeated for credit in different languages. Interested students should contact the Foreign Languages Department for available offerings.

FNLA 210. Intercultural Experiences (2). A comparison of life, language and culture in the United States and other parts of the world. Grade will be S or U.

FNLA 298. Special Topics (1-6).

FNLA 398. Special Topics (1-6).

FNLA 401. Introduction to Romance Linguistics (3). Prerequisite, two years of a romance language, or equivalent. Analysis of the phonology, morphology and syntax of the romance languages. Credits to be counted toward either French or Spanish major or minor.

FNLA 481. Methods and Materials for the Teaching of Modern Foreign Languages (4). Prerequisite, at least two 300-level courses or equivalent in a foreign language. Emphasizes the practical concerns of second and foreign language instruction. Explores as a group the theory underlying approaches incorporated into personalized teaching styles. Formerly FNLA 428.

FNLA 482. Applied Linguistics: Foreign Language Acquisition (4). Prerequisite, FNLA 481, or departmental approval. This course explores second and foreign language acquisition/learning from an applied linguistics perspective. The focus of this course will be on the learner.

FNLA 483. Sociolinguistics (4). Prerequisite, ANTH/ENG 180 or 480, ANTH 381, or FNLA 481 or departmental approval. Concepts and methods of sociolinguistic analysis in first and second languages. Will examine differences among cultures in the relationship between language usage and inequality. FNLA 483 and ANTH 483 are equivalent courses. Students may not receive credit for both.

FNLA 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

FNLA 491. Workshop (1-6). Prerequisite, departmental permission. May be repeated for credit.

FNLA 492. Practicum (1). Prerequisite, FNLA 481 and FNLA 482 or FNLA 483, or departmental approval. Provides student with a supervised foreign language (FL) teaching opportunity designed to sharpen awareness of the technical, personal and practical elements involved in effective FL teaching through regular observations of FL

and second language (L2) classes, daily experience in the FL class, and seminar discussion of issues and problems related to FL and L2 teaching.

FNLA 496. Individual Study (1-6).

FNLA 498. Special Topics (1-6).

Chinese Courses

CHIN 151, 152, 153. First Year Chinese (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language.

CHIN 251, 252, 253. Second Year Chinese (5,5,5). Courses must be taken in sequence. Prerequisite, CHIN 153 or equivalent. Graduated readings in modern Chinese writings with discussion conducted in Chinese.

CHIN 298. Special Topics (1-6).

CHIN 301. Chinese Literature in Translation (4). Prerequisite, grade of C- or better in English 101. A survey of Chinese literature in translation. CHIN 301 and AST 301 are equivalent courses. Students may not receive credit for both courses.

CHIN 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, CHIN 253 or equivalent. Should be taken in sequence.

CHIN 343, 344. Intermediate Conversation (2,2). Prerequisite, CHIN 253 or equivalent. Should be taken in sequence.

CHIN 398. Special Topics (1-6).

CHIN 496. Individual Study (1-6). Prerequisite, permission of instructor.

CHIN 498. Special Topics (1-6).

French Courses

FR 151, 152, 153. First Year French (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language.

FR 251, 252, 253. Second Year French (5,5,5). Courses must be taken in sequence. Prerequisite, FR 153 or equivalent. Thorough review of French grammar and graduated readings in modern French prose with discussions conducted in French.

FR 298. Special Topics (1-6).

FR 301. Introduction to French Literature (3). Prerequisite, FR 253 or equivalent. This course is designed as a transition course to prepare students for the advanced literature courses. Appreciation of literature and methods of analysis will be taught on a basic level through the careful examination of specific texts.

FR 310. French Civilization and Culture (3). Prerequisite, FR 253 or equivalent. Major aspects of French culture, philosophy and way of life will be emphasized.

FR 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, FR 253 or equivalent. Should be taken in sequence with FR 441.

FR 343, 344. Intermediate Conversation (2,2). Prerequisite for FR 343 is FR 253 or equivalent. Prerequisite for FR 344 is FR 343 or equivalent, or departmental approval.

FR 385. French Phonetics (3). Prerequisite, French 341, or departmental approval. Designed to show how French is pronounced, and how to attain accuracy which approximates native-like pronunciation as much as possible. Provides an opportunity to improve pronunciation.

FR 398. Special Topics (1-6).

FR 429. 18th Century French Literature (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval. The Enlightenment, with particular emphasis on Montesquieu, Diderot, Voltaire and Rousseau.

FR 441. Advanced Composition and Grammar (3). Prerequisite, FR 341 and 342, or departmental approval.

FR 442. Translation and Interpretation (2). Prerequisite, FR 342 or equivalent, or departmental approval.

FR 450. Contemporary French Novel (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval. From Proust to Camus.

FR 455. French Poetry Through the Ages (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval. Selected masterpieces from the Middle Ages to the present.

FR 491. Workshop (1-6). Prerequisite, departmental permission. May be repeated for credit.

FR 496. Individual Study (1-6). Prerequisite, permission of instructor.

FR 498. Special Topics (1-6).

German Courses

GERM 151, 152, 153. First Year German (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language.

GERM 251, 252, 253. Second Year German (5,5,5). Courses must be taken in sequence. Prerequisite, GERM 153 or equivalent. Graduated readings in modern German prose with discussion conducted in German. Thorough review of German grammar.

GERM 298. Special Topics (1-6).

GERM 301. Introduction to German Literature (3). Prerequisite, GERM, 253 or equivalent. Selected pieces of German literature characteristic of the Middle Ages to the present.

GERM 310. German Civilization and Culture (3). Prerequisite, GERM 253 or equivalent. The background, development, and especially the present-day situation of the German-speaking areas of the world.

GERM 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, GERM 253 or equivalent. Should be taken in sequence with GERM 441.

GERM 343, 344. Intermediate Conversation (2,2). Prerequisite for GERM 343 is GERM 253 or equivalent. Prerequisite for GERM 344 is GERM 343 or equivalent, or departmental approval.

GERM 385. German Phonetics (3). Prerequisite, German 341, or departmental approval. Designed to show how German is pronounced, and how to attain accuracy which approximates native-like pronunciation as much as possible. Provides an opportunity to improve pronunciation.

GERM 398. Special Topics (1-6).

GERM 431. German Classicism and Romanticism (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval. Course treats individual works and authors. May be offered in English for non-majors and non-minors and may be repeated for credit.

GERM 432. German Poetry (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval.

GERM 441. Advanced Composition and Grammar (3). Prerequisite, GERM 341 and 342, or departmental approval.

GERM 442. Translation and Interpretation (2). Prerequisite, GERM 342 or equivalent, or departmental approval.

GERM 454. The German Narrative (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval. The German short story, Novelle, and novel.

GERM 456. German Drama (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or departmental approval.

GERM 458. Modern German Literature (3). Prerequisite, at least two 300-level courses, one of which must be a literature course, or the permission of the instructor. Treats Boell, Brecht, Hesse, Kafka, and others. May be offered in English to non-majors and non-minors and may be repeated for credit.

GERM 491. Workshop (1-6). Prerequisite, departmental permission. May be repeated for credit.

GERM 496. Individual Study (1-6). Prerequisite, permission of instructor.

GERM 498. Special Topics (1-6).

Japanese Courses

JAPN 151, 152, 153. First Year Japanese (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Foundation in basic structural principles of the language.

JAPN 251, 252, 253. Second Year Japanese (5,5,5). Courses must be taken in sequence. Prerequisite, JAPN 153 or equivalent. Graduated readings in modern Japanese writings with discussion conducted in Japanese. Review of Japanese grammar.

JAPN 298. Special Topics (1-6).

JAPN 301. Japanese Literature in Translation (4). Prerequisite: C- or better in English 101. A survey of Japanese literature in translation. JAPN 301 and AST 347 are equivalent courses. Students may not receive credit for both courses.

JAPN 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, JAPN 253 or equivalent. JAPN 341 and 441.

JAPN 343, 344. Intermediate Conversation (2,2). Prerequisite for JAPN 343 is JAPN 253 or equivalent. Prerequisite for JAPN 344 is JAPN 343 or equivalent, or departmental approval.

JAPN 398. Special Topics (1-6).

JAPN 441. Advanced Composition and Grammar (3). Prerequisite, JAPN 341 and 342, or departmental approval.

JAPN 442. Translation and Interpretation (2). Prerequisite, JAPN 342 or equivalent, or departmental approval.

JAPN 496. Individual Study (1-6). Prerequisite, permission of instructor.

JAPN 498. Special Topics (1-6).

Russian Courses

RUSS 151, 152, 153. First Year Russian (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language.

RUSS 251, 252, 253. Second Year Russian (5,5,5). Prerequisite, RUSS 153 or equivalent. Courses must be taken in sequence. Thorough review of Russian grammar and graduated readings in Russian prose and poetry with discussions conducted in Russian.

RUSS 298. Special Topics (1-6).

RUSS 310. Russian Civilization and Culture (3). Prerequisite, RUSS 253 or permission. Literature, art, music, history and philosophy. Lectures and discussions conducted in Russian. Formerly RUSS 254. Student may not receive credit for both.

RUSS 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, RUSS 253 or equivalent. Should be taken in sequence with RUSS 441.

RUSS 343. Intermediate Conversation (2).

RUSS 398. Special Topics (1-6).

RUSS 441. Advanced Composition and Grammar (3). Prerequisite, RUSS 341 and 342, or departmental approval.

RUSS 496. Individual Study (1-6). Prerequisite, permission of instructor.

RUSS 498. Special Topics (1-6).

Spanish Courses

SPAN 151, 152, 153. First Year Spanish (5,5,5). Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language.

SPAN 181. Intensive Review of First Year Spanish (5). Prerequisite, minimum of two years of high school Spanish or equivalent. Intensive review of first year Spanish for students with the equivalent of two years of high school Spanish who wish to continue with Second Year Spanish.

SPAN 251, 252, 253. Second Year Spanish (5,5,5). Courses must be taken in sequence. Prerequisite, SPAN 153 or equivalent. Graduated readings in modern Spanish prose with discussions conducted in Spanish. Thorough review of Spanish grammar.

SPAN 298. Special Topics (1-6).

SPAN 301. Introduction to Hispanic Literature (3). Prerequisite, SPAN 253 or equivalent. This course is designed principally as a transition course to prepare students for the advanced literature courses. Appreciation of literature and methods of analysis will be taught on a basic level through the careful examination of specific texts.

SPAN 310. Hispanic Civilization and Culture (3). Prerequisite, SPAN 253 or equivalent. Major aspects of Hispanic cultures, with particular emphasis on contemporary Hispanic customs, philosophy, and way of life.

SPAN 341, 342. Intermediate Composition and Grammar (3,3). Prerequisite, SPAN 253 or equivalent.

SPAN 343, 344. Intermediate Conversation (2,2). Prerequisite for SPAN 343 is SPAN 253 or equivalent. Prerequisite for SPAN 344 is SPAN 343 or equivalent, or departmental approval.

SPAN 345, 346. Spanish for Spanish Speakers (2). Prerequisite for SPAN 345 is SPAN 253 or equivalent. Prerequisite for SPAN 346 is SPAN 345 or equivalent. Advanced grammar, writing techniques and lexicon for heritage or native-like speakers of Spanish.

SPAN 385. Spanish Phonetics (3). Prerequisite, SPAN 341, or departmental approval. Designed to show how Spanish is pronounced, and to attain accuracy which

approximates native-like pronunciation as much as possible. Provides an opportunity to improve pronunciation.

SPAN 398. Special Topics (1-6).

SPAN 431. Advanced Grammar (2). Prerequisite, SPAN 342 or equivalent. Study of advanced Spanish grammar and syntax. Focus on areas of grammar especially problematic for English speakers. Students may not receive credit for SPAN 441 and SPAN 431.

SPAN 432. Spanish Advanced Composition and Stylistics (2). Prerequisite, SPAN 342 or equivalent. Develop writing techniques through the analysis of varied texts. Through the process of writing, students will find the appropriate balance of form and content. Students may not receive credit for both SPAN 432 and SPAN 441.

SPAN 440. Spanish for Teachers (3). Prerequisite, at least one grammar class at the 300 or 400 level, or departmental approval. A review of different aspects of the Spanish language with an emphasis on providing teachers with innovative approaches and practice in presenting the material covered.

SPAN 442. Translation and Interpretation (3). Prerequisite, SPAN 342 or equivalent, or departmental approval.

SPAN 444. Chicano Literature (3). Prerequisite, SPAN 301 or departmental approval. A study of works in all genres by Chicano writers. Discussions and most readings will be in Spanish.

SPAN 445. Spanish Medieval Literature (3). Prerequisite, SPAN 301 or departmental approval. This course deals with some of the most representative works, literary genres, and currents of the Spanish Middle Ages.

SPAN 446. Hispanic Cinema (3). Prerequisite, SPAN 301 or departmental approval. A study of major films from Spain and Latin America, in their various national contexts.

SPAN 449. Spanish Golden Age Literature (3). Prerequisite, SPAN 301 or departmental approval. Novel, theatre and poetry in 16th and 17th century Spain, including works by Cervantes, Lope de Vega, Calderon or Quevedo.

SPAN 456. The Hispanic Short Story (3). Prerequisite, SPAN 301 or department approval. Familiarization with the genre of short story writing and its reflections in the major Spanish and Latin American authors of that genre in an historical and literary perspective.

SPAN 457. Spanish-American Theater (3). Prerequisite, SPAN 301 or department approval. Study of dramatic and performance theories and of theatrical pieces from Latin America.

SPAN 458. Spanish-American Narrative (3). Prerequisite, SPAN 301 or department

approval. Study of theories of narrative fiction and of novels and short stories from Latin America.

SPAN 459. Spanish-American Poetry (3). Prerequisite, SPAN 301 or department approval. Study of poetic theories and of main developments in the poetry of Latin America.

SPAN 465. Spanish Theater (3). Prerequisite, SPAN 301 or department approval. Study of dramatic and performance theories and of theatrical pieces from Spain.

SPAN 466. Spanish Poetry (3). Prerequisite, SPAN 301 or department approval. Study of poetic theories and of main developments in the poetry of Spain.

SPAN 467. Hispanic Literature and Film (3). Prerequisite, SPAN 301 or department approval. Study of fundamental themes in contemporary Hispanic literature and its relation with the art of films.

SPAN 471. Hispanic/Latino Cultures of the U.S. (3). Prerequisite, SPAN 301 and SPAN 310, or concurrent enrollment with SPAN 301 and SPAN 310, or equivalent. The course content focus is on the study of the Hispanic/Latino cultures of the United States. Course is conducted only in Spanish.

SPAN 491. Workshop (1-6). Prerequisite, department permission. May be repeated for credit.

SPAN 496. Individual Study (1-6). Prerequisite, permission of instructor.

SPAN 498. Special Topics (1-6).

Undergraduate Courses/ Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: SPAN 305. Spanish for Bilingual School Personnel (3); SPAN 383. Spanish-English Contrastive Linguistics (4)

Foreign Studies Courses Study Abroad

Courses with FNST prefixes in beginning, intermediate and advanced language (111-113, 211-213, 311-312, 411-412), culture and civilization (310) and literature (413) are not offered on campus and are available only in connection with study abroad programs and must be taught in the foreign language. For further information contact international programs or the Foreign Languages Department.

FNST 111, 112, 113. First Year Foreign Language (1-6). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time in the case of intensive courses. May be repeated for credit. Interested students should contact the

Foreign Languages Department or the Office of International Studies and Programs.

FNST 211, 212, 213. Second Year Foreign Language (1-6). Offered only in study abroad programs. May be repeated for credit.

FNST 310. Culture and Civilization (1-6). Offered only in study abroad programs. Major aspects of the culture, philosophy and way of life of the host country will be emphasized. May be repeated for credit.

FNST 311, 312, 313. Third Year Foreign Language (1-6). Offered only in study abroad programs. A study of grammar, conversation and/or composition at the third year level. May be repeated for credit.

FNST 320. Literature (1-6). Prerequisite, second year foreign language or equivalent. Offered only in study abroad programs. An in-depth study of one or more authors, periods, or genres of the literature of the host country. May be repeated for credit.

FNST 411, 412, 414. Fourth Year Foreign Language (1-6). Offered only in study abroad programs. A study of grammar, conversation and/or composition at the fourth year level. May be repeated for credit.

FNST 420. Literature (1-6). Offered only in study abroad programs. An in-depth study of one or more authors, periods or genres of the literature of the host country. May be repeated for credit.

GENERAL STUDIES

Program Heads:

Associate Vice President for Undergraduate Studies
Dean of Arts and Humanities
Dean of the Sciences

Faculty:

All faculty in College of Arts and Humanities
All faculty in College of the Sciences
Selected faculty in College of Business

Since the program is a student-designed, interdisciplinary major, course selections will vary according to the student proposal; however, depending on the General Studies major selected, courses will be limited as follows:

Bachelor of Arts

General Studies – Humanities

This division of general studies is for students whose primary interest in the humanities requires interdisciplinary programs and course selections which are not possible within single academic programs or established curricula. Students who wish to earn a Bachelor of Arts in Humanities will devise an approved,

coherent program of study with the coordinator which fulfills an academic or career goal and includes prerequisites consistent with the 300-400 level major course work.

A. 62 Credit Major (3560):	
Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
60 credits must be taken from the list of courses approved for the Humanities Major, 45 of which must be upper division. Students specializing in Humanities must take courses in at least three disciplines within the Major. No more than 15 credits may be numbered 490	
Total	62

B. 47 Credit Major (3555):	
Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
45 credits must be taken from the list of courses approved for the Humanities Major, 30 of which must be upper division. Students specializing in Humanities must take courses in at least three disciplines within the Major. No more than 10 credits may be numbered 490	
Total	67-92

In addition, a 45 credit major must complete either a traditional departmental minor (20-45 credits) or a second major, which may be either a traditional major or a General Studies major with a different major... 20-45

Courses Approved for the General Studies – Humanities Major

Art (all courses)
 Communication (all courses)
 English (all courses)
 Foreign Languages (all courses)
 History (all courses)
 Humanities (all courses)
 Music (all courses)
 Philosophy (all courses)
 Religious Studies (all courses)
 Theatre Arts (all courses)

Bachelor of Science

General Studies – Social Sciences

This division of General Studies is for students whose primary interest in the Social Sciences requires interdisciplinary programs and course selections which are not possible within single academic programs or established curricula. Students who wish to earn a Bachelor of Science in Social Sciences will devise an approved, coherent program of study with the coordinator which fulfills an

academic or career goal and includes prerequisites consistent with the 300-400-level major course work.

A. 62 Credit Major (3570):	
Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
60 credits must be taken from the list of courses approved for the Social Science Major, 45 of which must be upper division. Students specializing in Social Sciences must take courses in at least three disciplines within the Major. No more than 15 credits may be numbered 490 ...	
Total	62

B. 47 Credit Major (3565):	
Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
45 credits must be taken from the list of courses approved for the Social Sciences Major, 30 of which must be upper division. Students specializing in Social Sciences must take courses in at least three disciplines within the Major. No more than 10 credits may be numbered 490	
Total	67-92

In addition, a 45 credit major must complete either a traditional departmental minor (20-45 credits) or a second major, which may be either a traditional major or a General Studies major with a different major... 20-45

Courses Approved for the General Studies – Social Sciences Major

Anthropology: All Anthropology Courses EXCEPT Natural Sciences-based courses listed below:

ANTH 110, Introduction to Biological Anthropology
 ANTH 110LAB, Biological Anthropology Laboratory
 ANTH 310, Research/Laboratory in Biological Anthropology
 ANTH 311, Advanced Biological Anthropology
 ANTH 312, Human Origins
 ANTH 313, Primate Social Behavior
 ANTH 314, Human Variations and Adaptations in Living Populations
 ANTH 315, Forensic Skeletal Analysis
 ANTH 412, Long Term Primate Studies
 ANTH 416, Pongid Behavior
 ANTH 418, Primate Evolution
 ANTH 485, Methods and Theory of Biological Anthropology

Business (approved courses only)
 BUS 241, Legal Environment of Business
 BUS 341, Advanced Business Law
 HRM 381, Management of Human

Resources
 HRM 479, Industrial Relations/Collective Bargaining
 MGT 380, Organizational Management
 MGT 383, Contemporary Management Practices
 MGT 384, Introduction to International Business
 MGT 389, Business and Society
 MGT 481, Organizational Behavior
 MGT 482, Applied Management and Organizational Behavior
 MGT 483, Organizational Change
 MKT 360, Principles of Marketing
 MKT 367, Consumer Behavior

Economics (all courses)
 Ethnic Studies (all courses)
 Geography (all courses EXCEPT Physical Geography courses listed below):
 GEOG 107, Introduction to Physical Geography
 GEOG 386, Geomorphology
 GEOG 387, Pedology
 GEOG 388, Climatology
 GEOG 453, Wetland Analysis
 GEOG 476, Advanced Geomorphology
 GEOG 477, Advanced Pedology
 GEOG 478, Advanced Climatology
 History (all courses)
 Law and Justice (all courses)
 Political Science (all courses)
 Psychology (all courses)
 Sociology (all courses)
 Women Studies (all courses)

Bachelor of Science

General Studies – Natural Sciences

This division of General Studies is for students whose primary interest in the biological or physical sciences or mathematics which offer broader options in course selections than are possible within single departments. Students who wish to earn a Bachelor of Science degree will devise an approved, coherent program of study with the coordinator which fulfills an academic or career goal and included prerequisites consistent with the 300-400-level major course work.

A. 62 Credit Major (3580):	
Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
60 credits must be taken from the list of courses approved for the Natural Science Major, 45 of which must be upper division. Students specializing in Natural Sciences must take courses in at least three disciplines within the Major. No more than 15 credits may be numbered 490 ...	
Total	62

B. 47 Credit Major (3575):

Required Courses	Credits
GEN 289, Proposal Colloquium	1
GEN 489, Senior Colloquium	1
45 credits must be taken from the list of courses approved for the Natural Sciences Major, 30 of which must be upper division. Students specializing in Natural Sciences must take courses in at least three disciplines within the Major. No more than 10 credits may be numbered 490	
	45

In addition, a 45 credit major must complete either a traditional departmental minor (20-45 credits) or a second major, which may be either a traditional major or a General Studies major with a different major... 20-45

Total 67-92

Courses Approved for the General Studies – Natural Sciences Major

- Anthropology (Biological Anthropology)
 - ANTH 110, Introduction to Biological Anthropology
 - ANTH 110LAB, Biological Anthropology Laboratory
 - ANTH 310, Research/Laboratory in Biological Anthropology
 - ANTH 311, Advanced Biological Anthropology
 - ANTH 312, Human Origins
 - ANTH 313, Primate Social Behavior
 - ANTH 314, Human Variations and Adaptations in Living Populations
 - ANTH 315, Forensic Skeletal Analysis
 - ANTH 412, Long Term Primate Studies
 - ANTH 416, Pongid Behavior
 - ANTH 418, Primate Evolution
 - ANTH 485, Methods and Theory of Biological Anthropology
- Biological Sciences (all courses)
- Chemistry (all courses)
- Computer Science (all courses)
- Geography (Physical geography courses only)
 - GEOG 107, Introduction to Physical Geography
 - GEOG 273, Geography of Rivers
 - GEOG 386, Geomorphology
 - GEOG 387, Pedology
 - GEOG 388, Climatology
 - GEOG 450, Geography of Arid Lands
 - GEOG 451, Mountain Environments
 - GEOG 452, Coastal Environments
 - GEOG 453, Wetland Analysis
 - GEOG 476, Advanced Geomorphology
 - GEOG 477, Advanced Pedology
 - GEOG 478, Advanced Climatology
 - GEOG 479, Geography of the West
- Geological Sciences (all courses)
- Mathematics (all courses)
- Physics (all courses)

General Studies Courses

- GEN 289. Proposal Colloquium (1).** Prerequisite, permission of the Associate Vice President for Undergraduate Studies. Introduction to the General Studies Major, General Studies degree proposal design and preparation. Grade will be S or U.
- GEN 489. Senior Colloquium (1).** Prerequisite, permission of the Associate Vice President for Undergraduate Studies. End of program assessment; preparation of comprehensive degree report and/or descriptive portfolio of project. Grade will be S or U.

GEOGRAPHY AND LAND STUDIES

Faculty
Chair: Karl Lillquist
Lind Hall 119C

- Professors:**
- John A. Alwin, Human Geography, Geographic Education, Pacific Rim, Asia, Western North America
 - James L. Huckabay, Energy Resources, Climatology, Air Photo Interpretation
 - Nancy B. Hultquist, GIS, Economic and Urban Geography, Computer Cartography, Remote Sensing.
 - Morris L. Uebelacker, Human Geography, Yakima River Basin, Field Methods

- Associate Professors:**
- Anthony Gabriel, Biogeography, Environmental Studies, Coastal Zone Management, Pacific Northwest
 - Robert Hickey, GIS, Remote Sensing, Environmental Impacts, Coastal Zones, Australia
 - Robert Kuhlken, Land-Use Planning, Cultural Ecology, Historical Geography, Oceania
 - Karl D. Lillquist, Physical Geography, Geomorphology, Soils, Environmental Change in Arid and Alpine Watersheds

- Assistant Professors:**
- J. Anthony Abbott, Political Ecology, Agricultural Systems, Latin America
 - Christopher Kent, Physical Geography, Water Resources, Watershed Planning, North America
- Adjunct Faculty:**
- Elaine K. Glenn, Middle East, Political Geography, World Regional Geography
 - Allen Sullivan, Physical Geography, Natural Resources

General Departmental Information

Geography's traditional concern with the inter-relatedness of the natural and human environments, and reasons for their differences from place to place, provides important insights into many of the complex problems facing society today.

The Department stresses flexibility in the selection of course sequences for majors and encourages study in related departments among the social and natural sciences. The Department is an active participant in the following university programs: Environmental Studies, Energy Studies, Asia/Pacific Studies, Latin American Studies, International Studies and Programs, and Resource Management graduate program. The department also maintains a well-appointed Geographic Information Systems (GIS) laboratory which benefits majors from other programs in addition to geography.

If you choose to major in Geography, you will be required to take a core sequence of five courses. The B.A. allows great flexibility in working out a major with the help of one of our faculty advisors. Your major will include a combination of courses in Geography and related fields, as approved by one of our departmental advisors, that will best enable you to achieve your goals in life, a Geography-related career (e.g., planning, GIS, environmental/resource management) and/or graduate school.

All students who wish to major in Geography must:

1. have a 2.25 minimum GPA in all coursework taken up to the time of admission;
2. apply for acceptance into the Geography and Land Studies major;
3. upon acceptance into the program, meet with their assigned advisor to develop a Major Contract;
4. earn a C- or better grade in each of the courses in their Major Contract

Geography Core Requirements	Credits
GEOG 101, World Regional Geography	5
GEOG 107, Introduction to Physical Geography	5
GEOG 108, Introduction to Human Geography	5
GEOG 203, Map Reading and Interpretation.	3
GEOG 489, Geography Capstone	2

Geography Core Total 20

The Geography Major includes two options: Bachelor of Arts - 45 credits, and Bachelor of Arts - 60 credits.

Bachelor of Arts

Geography Major 45 credits (3595)

The Geography Major—45 credits is recommended for students who wish to develop a broad knowledge of Geography yet retain the overall flexibility to prepare themselves for a variety of employment opportunities or graduate study. Students taking this major are required to have a second major or a minor.

Required Courses	Credits
Geography core requirements	20
Department approved electives	12-20
Must include an upper division geography course in each of the four subfields: regional, physical, human, and techniques.	
Other Department-approved electives	5-13
Total	45

Bachelor of Arts

Geography Major 60 credits (3600)

This major is intended for students who wish to develop depth and breadth in a particular portion of Geography in preparation for a career or graduate study in Geography. Students may specialize in one of five tracks within the Geography Major—60 credits: Geotechniques, Global and Area Studies, Physical Geography, Planning, and Environmental /Resource Geography. Recommended electives for each of these specializations are listed on the department's Web page. In consultation with a departmental advisor, students may choose a specialization and design a program of component courses which best fits specific career goals and aspirations.

Required Courses	Credits
Geography core requirements	20
Department approved electives	12-20
Must include one upper-division geography course in each of the four subfields: regional, physical, human, and techniques.	
Other Department-approved electives	20-28
Total	60

Geography: Teaching Major (3603)

Senior high school teachers are advised to accompany this with a major in a field in which a major portion of a full-time teaching assignment can be expected. Junior high school teachers must combine this with minors in both History and English. GEOG 203, Map

Reading and Interpretation, provides map reading skills for all teaching levels. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department. For elementary school teaching see the Department of Teacher Education Programs. Please note: Geography is no longer a valid endorsement for education majors in the state of Washington.

Required Courses	Credits
GEOG 101, World Regional Geography	5
GEOG 107, Introduction to Physical Geography	5
*GEOG 203, Map Reading and Interpretation	3
GEOG 304, Economic Geography	5
GEOG 308, Cultural Geography	5
GEOG 386, Geomorphology OR GEOG 388, Climatology	5
Regional Geography at 300 level or above	5-10
Systematic Geography at 300 level or above	3-7
Department approved electives	3-7
Total	46

*A requirement for prospective teachers (WAC 180-79-356). WAC also requires a minimum of 24 credits for endorsement to teach in the public schools.

Geography Minor (3600)

Required Courses	Credits
GEOG 101, World Regional Geography	5
GEOG 107, Introduction to Physical Geography	5
GEOG 108, Introduction to Human Geography	5
GEOG 203, Map Reading and Interpretation	3
Any upper division geography courses	7
Total	25

Certificate in Geographic Information Systems (GIS)

The GIS certificate provides recognition for students completing the required number of GIS-related classes (26 credits) at a high level of competence (minimum average GPA of 2.7). Certification will provide students with a powerful tool to assist their future job searches.

Required Courses	Credits
GEOG 303/403, Introductory GIS	5
GEOG 404, Intermediate GIS	4
GEOG 410, Airphoto Interpretation	4
GEOG 430, Remote Sensing	5
Choose from the following electives*	8
GEOG 409, Quantitative Methods (4)	
GEOG 413, Computer Cartography (4)	
GEOG 417, Advanced GIS (4)	

GEOG 485, Topics in GIS/ Remote Sensing (4)	
**GEOG 496, Independent Study (GIS Topics) (1-6)	
GEOG 490, Cooperative Education (GIS Topics) (1-12)	
GEOG 493, Geography Field Experience (GIS Topics) (1-12)	
CS 301, Data Structures (4)	
Other electives as approved by the Director	
*A minimum of 8 credits taken from the list of electives at least 4 credits of which must be a "GIS" class. All electives must be approved by the certificate director.	
**Students may also take Advanced GIS or Introduction to Visual Basics for ESRI Software as 1 credit GEOG 496 classes up to a maximum of 4 classes (both to CWU and ESRI).	
Total	26

Geography Courses

GEOG 101. World Regional Geography (5). Regions and nations of the world together with the changing elements of the physical and human environment which support them.

GEOG 107. Introduction to Physical Geography (5). The complex weather, climate, water, landforms, soils and vegetation comprising Earth's physical environments over space and time.

GEOG 108. Introduction to Human Geography (5). Distribution and spatial variation of population, settlement patterns, cultural elements of language, religion, and lifeways, and the economic and political organization of the planet.

GEOG 203. Map Reading and Interpretation (3). An introduction to commonly available maps, including topographic, nautical, weather, land use, and others. Necessary concepts, such as scale, are introduced.

GEOG 215. Concepts of GIS (3). Basic principles and uses of geographic information systems (GIS). Practice with the use of GIS in solving land management and evaluation problems. Two hours lecture and four hours laboratory per week. Formerly ANTH/GEOG 431. GEOG 215 and ANTH 215 are equivalent courses. Students may not receive credit for more than one.

GEOG 221. Introduction to Geography (3). Using maps and other learning tools to understand spatial distributions and interactions of Earth's peoples, places, resources, and environments. Specifically designed for elementary school teachers.

GEOG 273. Geography of Rivers (5). Global, regional, and local physical and cultural patterns and processes within river basins.

- GEOG 303. Introductory Cartography and GIS (5).** Prerequisite, permission of the instructor. Applications, scope, and benefits of Geographic Information Systems (GIS). Classification and components of GIS. Data acquisition. Data management. Data errors. Implementation considerations. Applied experience using GIS software. GEOG 303 and GEOG 403 are equivalent courses. Student may not receive credit for both. Formerly GEOG 384.
- GEOG 304. Economic Geography (5).** Geographic survey of human livelihood and interaction with the environment. Agriculture, industry, and urbanization are examined in the context of an increasingly interdependent world system. Formerly GEOG 205. Student may not receive credit for both.
- GEOG 305. Introduction to Land Use Planning (5).** Investigation into the process and practice of urban and regional planning. Emphasis on historical development, legal foundations, and techniques of planning in the United States.
- GEOG 308. Cultural Geography (5).** Consequences of cultural diversity in the human occupation of the earth, and the interactions of human and natural systems.
- GEOG 310. Introduction to Landscape Analysis (5).** Application of concepts and techniques of landscape analysis. Specific landscapes are analyzed utilizing various techniques including remotely sensed imagery, historical records, and field observation and measurement.
- GEOG 343. Energy Resource Alternatives (3).** Solar, wind, water and biomass alternatives to traditional energy resources. Alternatives in power production, architecture, heating, transportation, agriculture and policies affecting their implementation. (Not open to students with credit in GEOG 398, Low Energy Living.)
- GEOG 346. Political Geography (4).** The spatial structure of political units. The effect of political, economic, social and earth resource factors on the areas, shapes, and boundaries of these units, and on the distribution of populations and institutions.
- GEOG 350. Resources, Population and Conservation (4).** The meaning of resources and conservation; population growth and its implications for land management, public control, and environment quality; attitudes regarding the use of resources; conservation thought and activities in the United States.
- GEOG 352. Geography of North America (5).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of the United States, Canada and Mexico.
- GEOG 355. Geography of the Pacific Northwest (4).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of the Pacific Northwest.
- GEOG 361. Soils (5).** Prerequisite: GEOG 107 or instructor's permission. Focus on properties, factors, processes and classifications of Earth's soils, past and present. Four hours of lecture and four hours of field/laboratory per week. GEOG 361 and GEOG 461 are equivalent courses. Students may not receive credit for both.
- GEOG 366. Geography of the Middle East (4).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of the Middle East.
- GEOG 371. Geography of Europe (5).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Europe.
- GEOG 373. Water Resources (4).** No prerequisites but GEOG 107 is recommended. Foundation course for understanding the physical and social dimensions of water resource use on a global scale. Special attention paid to issues in the American West.
- GEOG 382. Hydrology (5).** Provides a comprehensive introduction to both the global and local hydrologic cycle. Covers constituent processes, their measurements and quantitative relationships, plus basic water quality parameters. GEOG 382 and GEOG 482 are equivalent courses. Students may not receive credit for both.
- GEOG 386. Geomorphology (5).** Prerequisites, GEOG 107 or GEOL 101 or GEOL 102 and GEOL 101L. Descriptive and interpretive examination of the earth's land forms. Four lectures and three hours laboratory or field trips. GEOG 386 and GEOL 386 are equivalent courses. Students may not receive credit for both.
- GEOG 388. Climatology (5).** Prerequisite, GEOG 107 or instructor's permission. Elements of, and factors and processes affecting Earth's climates, present, past, and future. Four hours lecture and two hours laboratory/field per week. Course fee required.
- GEOG 389. Ecosystems Geography (5).** Investigates the functional relationships between biophysical processes and their spatial and temporal patterns at various scales. Introduces approaches to land systems analysis focusing upon ecosystems.
- GEOG 398. Special Topics (1-6).**
- GEOG 399. Seminar (1-5).**
- GEOG 403. Introductory Cartography and GIS (5).** Prerequisite, permission of the instructor. Applications, scope, and benefits of Geographic Information Systems (GIS). Classification and components of GIS. Data acquisition. Data management. Data errors. Implementation considerations. Applied experience using GIS software. GEOG 403 and GEOG 303 are equivalent courses. Student may not receive credit for both. Formerly GEOG 384.
- GEOG 404. Intermediate GIS (4).** Prerequisite, GEOG 303/403 or permission. Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. GEOG 404, ANTH 404 and GEOL 404 are equivalent courses. Students may not receive credit for more than one. Formerly ANTH/GEOG/GEOL 385.
- GEOG 405. Advanced Topics in Land Use Planning (3).** Prerequisite, GEOG 305. Selected issues and problems in land use planning and environmental control. Topics may include growth management, small town and rural planning, or coastal zone management. May be repeated for credit.
- GEOG 408. Advanced Topics in Human Geography (3).** Focuses on the content of GEOG 308 in greater detail with particular emphasis on land use in non industrial societies. Topics will vary, consult with instructor.
- GEOG 409. Quantitative Methods in Geography (4).** Prerequisite, MATH 130; equivalent transfer or HS credit. Quantitative analysis assessment in geography and resource management. Emphasis on spatial statistics.
- GEOG 410. Airphoto Interpretation (4).** Prerequisite, instructor's permission. Introduction to airborne photography, and the tools and techniques to apply this photography to geographical issues. Three hours lecture and two hours laboratory per week. Course fee required.
- GEOG 413. Computer Cartography (4).** Prerequisite, permission of instructor. Computerized mapmaking basics of contour, choropleth, 3-D, and other thematic maps from digitizing to final color product. Applied experience using cartographic software.
- GEOG 415. Geography of Oceania (3).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Australia, New Zealand, and the Pacific Islands.

- GEOG 417. Advanced GIS (4).** Prerequisite, GEOG 404, ANTH 404, or GEOL 404 or permission of instructor. Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. GEOG 417, ANTH 417 and GEOL 417 are equivalent courses. Students may not receive credit for more than one.
- GEOG 421. Practical Aids in Teaching Geography (3).** Materials and methods appropriate to teaching geography in public schools. Students will be come proficient in using maps, the globe, and other geographic media, including the Internet.
- GEOG 422. Geography of Food and Agriculture (5).** Overview of food and agriculture as it relates to specific geographic regions, production regimes, trade, and cuisine. Domestic and international issues explored through lecture and field study.
- GEOG 425. Field Methods in Geography (5).** Prerequisite, permission of instructor. Theory of, and practice in, geography field methods via in-depth field research projects. Topics include field observation, data collection, and data interpretation. Two hours lecture and five hours field per week.
- GEOG 430. Remote Sensing (5).** Prerequisites, GEOG 410 or GEOL 210, or permission of instructor. Principles of acquisition, analysis, and use of remotely sensed data (LANDSAT, SPOT, Ikonos, etc.). Applied experience using image processing software. Three hours lecture and three hours laboratory per week. GEOG 430, GEOL 430 and GEOL 530 are equivalent courses. Students may not receive credit for more than one course.
- GEOG 440. Ecology and Culture (4).** Investigation into interdependent environmental and human cultural systems. Traditional agroecologies and subsistence strategies; contemporary problems of resource management, social equity, political ecology, and sustainable development. GEOG 440 and ANTH 440 are equivalent courses. Students may not receive credit for both.
- GEOG 443. Energy Policy (5).** Prerequisite, PHYS 111 or permission. Legal, institutional, and economic frameworks for regional, national and international energy decisions.
- GEOG 445. Natural Resources Policy (4).** Prerequisite, permission of instructor. Development and significance of policies affecting resource management in the United States.
- GEOG 446. Land Use in the United States (3).** Historical geography of settlement and the evolution of subsequent land use patterns in the United States in response to changing economic and environmental conditions.
- GEOG 447. Problems in Resource Allocation (4).** Prerequisite, permission of instructor. Selected current problems in resource allocation.
- GEOG 448. Resource and Environmental Analysis (5).** Examination of the techniques and methodologies used for the evaluation and sustainable management of environmental resources from a variety of perspectives.
- GEOG 450. Geography of Arid Lands (4).** Unique physical environments of arid lands, and human interaction with these environments over space and time. Focus on natural resources and land use conflicts.
- GEOG 451. Mountain Environments (4).** Prerequisites, GEOG 107 and GEOG 108, or permission of instructor. Physical, human, and resource geography of mountain settings. Emphasis on the western hemisphere.
- GEOG 452. Coastal Environments (4).** Physical, human, and resource geography of coastal environments. Emphasis on physical processes, resource issues, and environmental management of coastal environments.
- GEOG 453. Wetlands Analysis (4).** Physical, human, and resource geography of wetland environments. Emphasis on physical processes, resource issues, and environmental evaluation and management of wetland environments.
- GEOG 460. Geography of International Trade (5).** Prerequisite, GEOG 304 or permission of the instructor. Geographic basis of international trade with special emphasis on the Pacific Northwest. Field trips required.
- GEOG 461. Soils (5).** Prerequisite: GEOG 107 or instructor permission. Focus on properties, factors, processes and classifications of Earth's soils, past and present. Four hours of lecture and four hours of field/laboratory per week. Same as GEOG 361, may not receive credit for both.
- GEOG 465. Wine: A Geographical Appreciation (3).** World overview of grape and wine industry emphasizing geographic themes. Includes all-day field trip to Yakima Valley viticultural area.
- GEOG 470. Geography of Latin America (4).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Latin America.
- GEOG 471. Geography of Middle America (3).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Mexico, Central America, and the Caribbean.
- GEOG 473. Watershed Analysis and Planning (4).** Prerequisite: GEOG 373 or permission of instructor. Examination of water resource analysis, development, management, and planning in the United States. Focus on contemporary problems, trends, and case studies.
- GEOG 474. Geography of China (4).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of China.
- GEOG 475. Geography of Asia (5).** Examination of the physical and cultural geography, human-environment interactions, landscapes, and regional diversity of Asia.
- GEOG 476. Advanced Geomorphology (2-4).** Prerequisites, GEOG 386 or GEOL 386, or instructor's permission. Selected advanced topics in geomorphology. Topics may include arid geomorphology, holistic watershed geomorphology, glacial geomorphology, and mass wasting geomorphology.
- GEOG 477. Advanced Pedology (2-4).** Prerequisites: GEOG 361 or permission of instructor. Selected advanced topics in soils. Topics may include Quaternary soils and composting. May be repeated to a maximum of 8 credits.
- GEOG 478. Advanced Climatology (2-4).** Prerequisites, GEOG 388 or permission of instructor. Selected advanced topics in climatology. Topics may include bioclimatology, Quaternary climate change, future climate change and microclimatology.
- GEOG 479. Geography of the West (1-12).** Prerequisites permission of instructor. In-depth field examination of the complex physical, human, and resource issues of one or more of the varied subregions of western North America. May be repeated for credit by permission of department chair.
- GEOG 481. Urban Geography (5).** Prerequisite, GEOG 304 or permission of instructor. The spatial and size distribution of cities as explained by their historical development and major functions. Analysis of the internal structure of cities and the results of urban growth.
- GEOG 482. Hydrology (5).** Provides a comprehensive introduction to both the global and local hydrologic cycle. Covers constituent processes, their measurements and quantitative relationships, plus basic water quality parameters. GEOG 482 and GEOG 382 are equivalent courses. Students may not receive credit for both.
- GEOG 485. Topics In GIS and Remote Sensing (4).** Prerequisites, GEOG 403, GEOG 430, or permission of instructor. Special topic classes in GIS and remote sensing. Applied experience using GIS or image processing software.
- GEOG 489. Geography Capstone (2).** Prerequisite, Geography major with senior standing. Assessment of past coursework and exploration of future opportunities.
- GEOG 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual

arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

GEOG 491. Workshop (1-6).

GEOG 492. Geography Teaching Experience (1-3). Prerequisites, 15 credits in Geography and permission of instructor. Experience in classroom, laboratory, and/or field teaching. May be repeated for credit with permission of department chair. Formerly GEOG 494.

GEOG 493. Geography Field Experience (1-12). Prerequisite, permission of instructor and Department Chair. Individual or group off-campus experience in the field study of geographical phenomena. May be taken more than once by permission of department chair.

GEOG 494. Applied GIS Project (2-6). Prerequisite, ANTH/GEO 215 and permission of instructor. GIS projects in Anthropology, Biology, Geography, Geology, Resource Management. May be repeated by permission of department chair. GEOG 494, ANTH 494 and GEOL 494 are equivalent courses. Formerly GEOG 492.

GEOG 496. Individual Study (1-6). Prerequisite, permission of instructor.

GEOG 498. Special Topics (1-6).

GEOG 499. Seminar (1-5).

GEOLOGICAL SCIENCES

Faculty

Chair: Lisa L. Ely
Lind 220

Professors

Lisa L. Ely, Geomorphology, Paleohydrology, Quaternary Geology, and Climate Change
M. Meghan Miller, Crustal Deformation, GPS Geodesy, Active Tectonics, and Remote Sensing
Charles M. Rubin, Paleoseismology, Earthquake Hazards, and Active Tectonics

Associate Professors

Wendy A. Bohrsen, Volcanology, Isotope Geochemistry, Igneous Petrology
Carey Gazis, Environmental Geochemistry, Stable Isotope Geochemistry, and Hydrogeology
Jeffrey Lee, Active and Regional Tectonics, Structural Geology

Assistant Professors

Timothy I. Melbourne, Seismology, Continental Dynamics

Adjunct Lecturers

Marie Ferland, Marine Stratigraphy, Quaternary Geology and Climate Change, Sedimentology
Steven Lundblad, Sedimentary Geology, Isotope Geochemistry
Jack Powell, Field Geology, Mineral Resources, Pacific Northwest Geology
Nick Zentner, Scientific Instructional Technician Supervisor

Emeritus Professors

Robert D. Bentley, Structural Geology, Igneous and Metamorphic Petrology, Regional Geology of the Pacific Northwest
James Hinthorne, Mineralogy, Geochemistry, Spatial Information Systems

General Departmental Information

Geosciences encompass the scientific study of the origin and evolution of the Earth. Energy, mineral and water resources, geologic hazards, pollution of natural waters, and earthquake prediction are just a few of the pressing societal concerns that are addressed by geoscientists. The Geological Sciences program has two major parts: (1) solid-earth geosciences, such as rocks, minerals, deformation and tectonic evolution of the earth's crust, and (2) earth processes over the last 10,000 years, such as active faulting, environmental geochemistry, hydrogeology and water resources, geologic hazards, seismology, surface processes, and volcanology. Field, laboratory, and computer skills are essential to the study of the Geological Sciences. Research in the geosciences is active and varied, with faculty and students interacting closely. Bachelor of Science and Bachelor of Arts degrees are offered in geology, and a Bachelor of Science degree in Environmental Geological Sciences. A Bachelor of Arts in Earth Sciences is also offered, and is intended for future secondary school teachers. Minors in Geology and Earth Sciences are also available to supplement careers in other fields.

Students who declare a major in geology must register with the department and work out a specific program of studies with the chairperson or an assigned advisor. Course programs can be tailored to the student's needs and interests with the aid of an academic advisor. Other course requirements may be modified in cases where past performance indicates superior ability. Students must be evaluated for math placement upon declaration of the major with the goal of establishing proficiency at the MATH 154 level early in the major program.

Bachelor of Science Major

The B.S. curriculum in geosciences prepares students for careers in solid-earth geosciences and environmental geology. This program

assures adequate preparation in the basic physical sciences and breadth in the geosciences, so that students are well prepared for graduate school and have flexibility in career decisions. The B.S. requires courses in the Geological Sciences and additional courses in mathematics, chemistry, and physics. The B.S. degree is also appropriate for students who wish to continue in other quantitative scientific fields or directions (e.g., medical school).

Bachelor of Arts Major

The B.A. degree is designed for students planning professional careers in the geosciences and for those preparing to incorporate geosciences into broader careers such as teaching, resource management, environmental planning, business, or law. The B.A. degree may be an appropriate prerequisite for some graduate programs, but a B.S. is generally recommended for those in the Geological Sciences. Election of this major will allow students to choose supporting courses from disciplines such as computer science, mathematics, and physics or other physical or biological sciences, or from disciplines as diverse as anthropology, environmental studies, or geography.

Bachelor of Science and Bachelor of Arts Geology Major (3650)

Required Core Courses	Credits
GEOL 101, Physical Geology OR	
GEOL 102, Geology of National Parks	4
GEOL 101LAB, Laboratory, Physical Geology Laboratory	1
GEOL 200, Earth Evolution and Global Change	5
GEOL 210, Introduction to Geologic Field Methods	4
GEOL 320, Rocks and Minerals	5
GEOL 346, Mineralogy	5
GEOL 360, Structural Geology	5
GEOL 370, Stratigraphy	5
GEOL 452, Geophysics OR	
GEOL 480, Geochemistry	4
GEOL 489, Geologic Field Methods	6-12
GEOL 487, End of Major Review	1

Electives selected from the following (take at least one with asterisk): 17-20
 GEOL 304, Plate Tectonics (5)
 GEOL 377 and 377LAB, Regional Natural History (5)
 GEOL 380, Environmental Geology and Natural Hazards (4)*
 GEOL 386, Geomorphology (5)*
 GEOL 415, Earthquake Geology and Neotectonics (5)*

GEOL 420, Tectonics of Western North America (4)	
GEOL 425, Environmental Geochemistry (5)*	
GEOL 445, Hydrogeology (5)*	
GEOL 452, Geophysics (4)	
GEOL 453, Seismology (5)	
GEOL 455, Applied Geophysics (4)*	
GEOL 474, Quaternary Geology (4)	
GEOL 475 Petrography and Petrogenesis (5)	
GEOL 476, Sedimentary Petrology (5)	
GEOL 478, Volcanology (5)	
GEOL 480, Geochemistry (4)	
GEOL 481, Advanced Mineralogy (4)	
GEOL 483, Isotopes as Tracers of Geological Processes (5)	
GEOL 488, Senior Colloquium in Geology (4)	

Geology Core Total 62-71

Allied science requirements for Bachelor of Science degree

A one year series is required in Math or Chemistry and two quarters is required of each of the other two subjects:

CHEM 181 and 181LAB, CHEM 182 and 182LAB required, CHEM 183	10-14
PHYS 181, 181LAB and PHYS 182, 182LAB; PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB may be substituted for 181, 181LAB and 182, 182LAB	10-15
MATH 172 and MATH 173 required, choose between 265, 272, or 311	10-15

Allied Science Total 34-35

Bachelor of Science Total 96-106

Bachelor of Science Environmental Geological Sciences Major (3660)

Required Core Courses	Credits
GEOL 101, Physical Geology OR GEOL 102, Geology of National Parks OR GEOL 108, Environmental Geology	4-5
GEOL 101LAB, Laboratory, Physical Geology Laboratory	1
GEOL 200, Earth Evolution and Global Change	5
GEOL 210, Introduction to Geologic Field Methods	4
GEOL 320, Rocks and Minerals	5
GEOL 370, Stratigraphy	5
GEOL 380, Environmental Geology and Natural Hazards	4
GEOL 386, Geomorphology	5

GEOL 425, Environmental Geochemistry OR GEOL 483, Isotopes as Tracers of Geological Processes	5
GEOL 445, Hydrogeology	5
GEOL 487, End of Major Review	1

Electives selected from the following (take at least one with asterisk): 17-20

GEOL 377 and 377LAB, Regional Natural History (5)	
GEOL 410, Snow Sciences: The Physics of Avalanches (4)	
GEOL 415, Earthquake Geology and Neotectonics (5)	
GEOL 430, Remote Sensing (5)	
GEOL 455, Applied Geophysics (4)	
GEOL 474, Quaternary Geology (4)	
GEOL 478, Volcanology (5)	
GEOL 483, Isotopes as Tracers of Geological Processes (5)	
BIOL 360, General Ecology (5)	
CHEM 345, Environmental Chemistry (5)	
ECON 462, Economics of Energy, Resources, and Environment (5)*	
GEOG 305, Introduction to Land Use Planning (5)*	
GEOG 361, Soils (5)	
GEOG 373, Water Resources (4)*	
GEOG 382, Hydrology (5)	
GEOG 445, Natural Resources Policy (5)*	

Geology Core Total 62-65

Allied science requirements for Bachelor of Science Environmental Geological Sciences degree

A one year series is required in Chemistry and Mathematics, two quarters are required in Physics, and one quarter is required in Biology.

CHEM 181 and 181LAB, CHEM 182 and 182LAB required, CHEM 183, and CHEM 183LAB	15
PHYS 181, 181LAB, and PHYS 182, 182LAB; PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB may be substituted for 181, 181LAB and 182, 182LAB	10-15
MATH 172 and MATH 173 and MATH 311	15
BIOL 111, Plant Biology	5

Allied Science Total 45-50

Bachelor of Science Environmental Geological Sciences Total 107-115

Allied science requirements for Bachelor of Arts degree

CHEM 111 and 111LAB OR CHEM 181 and 181LAB	5
Select from the following:	10
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB, 181, 181LAB, 182, 182LAB, 183, 183LAB	
MATH 172, 173, 311	
CHEM 182 and 182LAB	

Allied Science Total 15

Bachelor of Arts Total 77-86

Geology Minor (3650)

Required Courses	Credits
GEOL 101, Physical Geology OR GEOL 102, Geology of National Parks	4
GEOL 101LAB, Physical Geology Laboratory 1	
GEOL 200, Earth Evolution and Global Change	5
GEOL 210, Introduction to Geological Field Methods	4
GEOL 320, Rocks and Minerals	5
GEOL 346, Mineralogy	5
GEOL 386, Geomorphology	5
Department approved Geology electives	3-5

Total 32-34

Bachelor of Arts

Earth Science Major (2600)

This major satisfies the criteria for an endorsement in Earth Science. It does not constitute preparation for a career in geology. The Earth Science major qualifies students to teach earth science at the high school level and the middle or junior high school level. Students should seriously consider working toward endorsement in a second area, such as biology, chemistry, general science, physics, or mathematics. Earth Science majors are required to complete the Professional Education Program requirements offered through the Curriculum and Supervision Department. Students completing this program after August 31, 2005 will be required to pass the WEST-E (PRAXIS II) exam for Earth Science to receive a Washington State teaching endorsement in earth science.

Required Courses	Credits
GEOL 101, Physical Geology OR GEOL 102, Geology of National Parks	4
GEOL 101LAB, Physical Geology Laboratory 1	
GEOL 200, Earth Evolution and Global Change	5
GEOL 210, Introduction to Geological Field Methods	4

GEOL 320, Rocks and Minerals	5
GEOL 350, Northwest Geology	4
GEOL 370, Stratigraphy	5
GEOL 380, Environmental Geology.....	4
GEOL 386, Geomorphology	5
GEOL 492B, Laboratory Experience in Teaching Earth Science.....	2
MATH 153, Pre-Calculus Mathematics I.....	5
CHEM 111, 111LAB, OR CHEM 181, 181LAB, General Chemistry ..	5
GEOG 388, Climatology	5
PHYS 101, 101LAB, Astronomy of Stars and Galaxies OR PHYS 102, 101LAB, Astronomy of the Solar System	5
SCED 324, Science Education in Secondary Schools	4
SCED 495, Research	1-3

Total 65-67

Earth Science Minor (2600)

This minor is restricted to students working on a teaching major in biology, chemistry or physics. Earth Science minors will receive a Washington State teaching endorsement in earth science only upon passing the WEST-E (PRAXIS II) exam for Earth Science. SCED 324 requires admission to the Teacher Education Program.

Required Courses	Credits
GEOL 101, Physical Geology OR GEOL 102, Geology of National Parks	4
GEOL 101LAB, Physical Geology Laboratory 1 GEOL 200, Earth Evolution and Global Change.....	5
GEOL 350, Northwest Geology	4
GEOL 380, Environmental Geology and Natural Hazards	4
GEOL 492B, Laboratory Experience in Teaching Earth Science.....	2
GEOG 388, Climatology.....	5
PHYS 101, 101LAB, Astronomy of Stars and Galaxies OR PHYS 102, 101LAB, Astronomy of the Solar System	5
SCED 324, Science Education in Secondary Schools	4
Total 34	

Geology Courses

GEOL 101. Physical Geology (4). Corequisite, GEOL 101LAB. An introduction emphasizing the origin and nature of the common rocks, and the continually changing features of the earth's crust. Four lectures per week. Formerly GEOL 145. Students may not receive credit for both. Students may not receive credit for both GEOL 101 and GEOL 102.

GEOL 101LAB. Physical Geology Laboratory (1). Corequisite, GEOL 101 or GEOL 102. Application of map study to geological processes and land forms, identification of rocks and minerals. Two hours laboratory per week. May require field trips. Formerly GEOL 145.1. Students may not receive credit for both.

GEOL 102. Geology of National Parks (4). Corequisite, GEOL 101LAB. Fundamentals of geology applied to selected national parks in North America. Four lectures per week. Formerly GEOL 150. Students may not receive credit for both. Students may not receive credit for both GEOL 101 and GEOL 102.

GEOL 107. Volcanoes, Earthquakes, and Civilization (5). The role of natural geologic processes such as volcanoes, earthquakes and climate change in shaping the earth, the environment and human civilization. Four hour lecture per week plus required field trips. Formerly GEOL 170. Students may not receive credit for both.

GEOL 108. Introduction to Environmental Geology (5). Interaction between human activity and geological processes. Scientific discussion of global environmental issues such as ozone depletion, climate change, geologic hazards, natural resources and water use. Formerly GEOL 180. Students may not receive credit for both.

GEOL 188. Field Trips - Geologic Field Studies (1-3). Travel to field locations and study of specific geologic phenomena. May be repeated twice for trips to areas of significantly different geologic content. Grade will be S or U. Extra fees required.

GEOL 200. Earth Evolution and Global Change (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB. Evolution of Earth, plate tectonics, life, and climate over the last 4.5 billion years. Three lectures, four hours laboratory per week. Formerly GEOL 146. Students may not receive credit for both.

GEOL 210. Introduction to Geologic Field Methods (4). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB. Introduction to the basic methods of geologic field investigation. Emphasis on constructing geologic maps. The class will consist of two weeks in the field, primarily along the eastern front of the Sierra Nevada, California, or other regions in the western United States. The class will be offered during the summer break or as arranged by the instructor. Students will register for the class during the immediately subsequent academic year quarter. Extra fees required.

GEOL 295. Sophomore Research (1-6). By permission only. May be repeated for up to 12 credits.

GEOL 304. Plate Tectonics (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB, GEOL 200. Solid-earth processes, in a plate-tectonic framework, which integrates global marine and terrestrial geologic and geophysical data. Three hours lecture per week plus three hours of lab.

GEOL 308. Cascade Volcanoes (3). Study of present and past volcanic activity in the Pacific Northwest, related volcanic deposits, and potential volcanic hazards.

GEOL 320. Rocks and Minerals (5). Prerequisites, GEOL 101 or GEOL 102, and GEOL 101LAB and one Chemistry course (may be taken concurrently), or permission of instructor. Identification, classification, and evolution of common igneous and metamorphic rocks. Includes recognition and interpretation of rocks in typical field exposures. Three hours lecture and three hours laboratory per week plus required field trips.

GEOL 346. Mineralogy (5). Prerequisites, GEOL 320, or permission of instructor. Physical, chemical and crystallographic properties, and occurrence of minerals. Examination and description of hand specimens and crystal models. Theory and practice in optical mineralogy and X-ray diffraction, Four lectures and three hours laboratory per week.

GEOL 350. Northwest Geology (4). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB. Fundamentals of geology applied to the Pacific Northwest. Specific case studies may include student presentations. Course designed for students planning to teach in Washington public schools. Four hours per week.

GEOL 360. Structural Geology (5). Prerequisite, GEOL 200. Introduction to the basic principles of rock deformation with an emphasis on the geometry, styles, and mechanics of faulting and folding and the stereographic projection and analysis of geologic structures. Three lectures and four hours laboratory per week. Field trips required.

GEOL 370. Stratigraphy (5). Prerequisite, GEOL 200. Origin of sedimentary rocks, physical processes and stratigraphic principles. Identification of sedimentary rocks in hand sample. Four hours lecture and four hours laboratory per week. Three day field trip required.

GEOL 377. Regional Natural History (2). Prerequisite, permission of instructor. Classroom study of the natural history of a selected region as preparation for one-to-two week field trip. Emphasis will be on developing background skills to undertake a field exploration over the quarter (winter, spring, summer) break. Subtitles will identify the selected geographical

region (e.g. Baja California Natural History). GEOL 377 and BIOL 377 are equivalent courses. May be repeated for credit under a different subtitle (region). Formerly GEOL 377.1.

GEOL 377LAB. Regional Natural History (3). Corequisite, GEOL 377 and prerequisite, permission of instructor. Special fees required. Administered through Continuing Education. One-to-two week field trip to explore biological and physical patterns and processes in selected regions of North America. Emphasis will be on recording field observations, keeping a field journal, field study techniques, and performing investigations chosen and developed by student participants. Subtitles will identify the region studied. GEOL 377LAB and BIOL 377LAB are equivalent courses. Formerly GEOL 377.2. May be repeated for credit under a different subtitle.

GEOL 380. Environmental Geology and Natural Hazards (4). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB or permission of instructor. Examine interactions between humans and their environment from a geologic perspective, evaluating problems such as geologic hazards and the use of earth's resources. Four lectures per week and required field trips.

GEOL 386. Geomorphology (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB or GEOG 107 or permission of instructor. Descriptive and interpretive examination of the Earth's landforms. Four lectures and three hours laboratory or field trips. GEOL 386 and GEOG 386 are equivalent courses. Students may not receive credit for both.

GEOL 388. Field Trips (1-3). Prerequisite, permission of instructor. Intensive study of geological phenomena on field trips up to two weeks in length. Three days field work for each credit. Course may be repeated for areas of significantly different geologic content. Grade will be S or U. Extra fees required.

GEOL 392. Lab Experience Teaching Physical Geology (1). Prerequisite, GEOL 101 or GEOL 102 and GEOL 101LAB or permission of the instructor. May be taken twice for credit. Grade will be S or U. Formerly GEOL 393.

GEOL 395. Junior Research (1-6). By permission only. May be repeated for up to 12 credits.

GEOL 396. Individual Study (1-6). Prerequisite, permission of instructor.

GEOL 398. Special Topics (1-6).

GEOL 404. Intermediate GIS (4). Prerequisite, GEOG 303/403 or permission. Applied concepts, principles, and operation of fundamental GIS

applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. GEOL 404, ANTH 404 and GEOG 404 are equivalent courses. Students may not receive credit for more than one. Formerly ANTH/GEOG/GEOL 385.

GEOL 410. Snow Sciences: The Physics of Avalanches (4). Prerequisite, permission of instructor. Physical processes in avalanches and snow dynamics; snowpack accumulation, redistribution, metamorphism, energy balance, ablation, and runoff. Field investigations are required under rigorous outdoor conditions. Three hours lecture and six hours field laboratory per week.

GEOL 415. Earthquake Geology and Neotectonics (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB, and permission. Geomorphology, stratigraphy, and structural geology applied to the study of active faults and folds in a variety of tectonic settings. Relation of seismicity and geodetic measurements to geologic structure and active tectonic processes, including case studies of selected earthquakes. Three hours lecture and four hours laboratory per week. GEOL 415 and GEOL 515 are equivalent courses. Students may not receive credit for both.

GEOL 417. Advanced GIS (4). Prerequisite, GEOG 404, ANTH 404, or GEOL 404 or permission of instructor. Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. GEOL 417, ANTH 417 and GEOG 417 are equivalent courses. Students may not receive credit for more than one.

GEOL 420. Tectonic evolution of western North America (4). Prerequisites, GEOL 101 or 102 and 101LAB, GEOL 200, GEOL 360. Overview of the tectonic, structural, and stratigraphic evolution of western North America Cordillera, from the Proterozoic to the present day. Four lectures per week. GEOL 420 and GEOL 520 are equivalent courses. Students may not receive credit for both.

GEOL 425. Environmental Geochemistry (5). Prerequisite, CHEM 181, 181LAB, 182 and 182LAB, or permission of instructor. Global geochemical cycles, influences of rocks and soils on water chemistry, behavior of isotopes and trace elements. Includes class project studying local environmental geochemistry topic. Three lectures plus one 3-hour lab per week. GEOL 425 and GEOL 525 are equivalent courses. Students may not receive credit for both.

GEOL 430. Remote Sensing (5). Prerequisites, GEOG 410 or GEOL 210, or permission of instructor. Principles of acquisition, analysis, and use of remotely sensed data (LANDSAT, SPOT, Ikonos, etc.). Applied experience using image processing software. Three hours lecture and three hours laboratory per week. GEOL 430, GEOG 430 and GEOL 530 are equivalent courses. Students may not receive credit for more than one course.

GEOL 432. Field Geodetic Techniques (3). Training in field geodetic techniques, including scientific application of two or more precision surveying instruments: geodetic GPS, differential GPS, and electronic distance meter. Three hours a week and field project, or one-week field course. GEOL 432 and GEOL 532 are equivalent courses. Students may not receive credit for both.

GEOL 445. Hydrogeology (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB and MATH 154, or permission of instructor. Study of the occurrence and movement of ground water using geology, hydrology and geochemistry, with an emphasis on practical problems in water management. Three hours lecture and three hours laboratory per week. GEOL 445 and GEOL 545 are equivalent courses. Students may not receive credit for both.

GEOL 452. Geophysics (4). Prerequisites, MATH 154, or permission of instructor. Basic elasticity theory, gravity and geoid analysis. Terrestrial heat flow, Seismology. Three hours lecture per week plus four hours of scientific computing lab. No prior Unix experience required. Formerly GEOL 485; students may not receive credit for both.

GEOL 453. Seismology (5). Prerequisites, MATH 173 or permission of instructor. Elasticity theory, the wave equation, ray theory, diffraction, waveform modeling, travel time inversion. Data analysis. Three hours lecture per week plus four hours of scientific computing lab. Offered alternate years. GEOL 453 and GEOL 553 are equivalent courses. Students may not receive credit for both.

GEOL 454. Introduction to Scientific Computing (5). Introduction to numerical computation and simulation of problems relevant to Earth science. Three hours of lecture and three hours of lab. No prior Unix experience necessary. GEOL 454 and GEOL 554 are equivalent courses. Students may not receive credit for both.

GEOL 455. Applied Geophysics (4). Prerequisites, MATH 172 and PHYS 181. Background, principles, and techniques of geophysics as applied to geologic, environmental, and exploration problems. Three hours lecture plus two hours of

- laboratory or field work per week. required field trips. GEOL 455 and GEOL 555 are equivalent courses. Students may not receive credit for both.
- GEOL 474. Quaternary Geology (4).** Prerequisite, GEOL 386 or permission. Study of geological processes affecting Earth's most recent history. Course emphasizes Quaternary environmental change, glacial epochs, paleoclimatic methods, and dating techniques. GEOL 474 and GEOL 574 are equivalent courses. Students may not receive credit for both.
- GEOL 475. Petrography and Petrogenesis (5).** Prerequisites, GEOL 346. Petrogenetic, hand specimen, and thin section study of igneous, metamorphic, or sedimentary rocks. Three hours lecture and four hours laboratory or field work per week plus required field trips. GEOL 475 and GEOL 575 are equivalent courses. Students may not receive credit for both. Offered in alternate years.
- GEOL 476. Sedimentary Petrography (5).** Prerequisites, GEOL 200 and 346. Analysis and interpretation of depositional systems. Study of classic and carbonate rocks in hand sample, thin section, and in the field. Three hours lecture and four hours laboratory per week. GEOL 476 and GEOL 576 are equivalent courses. Students may not receive credit for both. Offered in alternate years.
- GEOL 478. Volcanology (5).** Prerequisites, GEOL 346 or consent of instructor. Study of volcanoes and associated deposits, styles of eruption, physical and chemical controls on eruption mechanisms, and volcanic hazards and hazard mitigation. Three hours lecture and four hours laboratory per week plus required field trips. GEOL 478 and GEOL 578 are equivalent courses. Students may not receive credit for both. Offered in alternate years.
- GEOL 480. Geochemistry (4).** Prerequisites, GEOL 320, CHEM 182, CHEM 182LAB, and MATH 154, or permission of instructor. An introduction to the branches of geochemistry, including the origin of elements, age dating, isotope geochemistry, and petrochemistry. Four hours lecture per week plus required field trips.
- GEOL 481. Advanced Mineralogy (4).** Prerequisites, GEOL 346 and CHEM 182, or permission of instructor. Crystal chemistry of rock-forming minerals. Theory and practice of determinative techniques such as the polarizing microscope, x-ray diffraction, and electron microprobe. Three hours lecture and three hours laboratory per week. Offered in alternate years. GEOL 481 and GEOL 581 are equivalent courses. Students may not receive credit for both.
- GEOL 483 Isotopes as Tracers of Geological Processes (5).** Prerequisites, CHEM 182, CHEM 182LAB and MATH 154 or permission of instructor. Covers principles of isotope geochemistry and applications to studies of geological processes such as hydrologic cycling, volcanic petrogenesis, and climate change. Three hours lecture per week plus required laboratory work and field trips. GEOL 483 and GEOL 583 are equivalent courses. Students may not receive credit for both. Offered in alternate years.
- GEOL 487. End of Major Review Seminar (1).** Prerequisite, students must be seniors intending to graduate during the current year. Students must be familiar with the language of geology and possess certain basic geologic skills. Coordinates student participation in program assessment activities and provides a structured avenue for student input into program goals. Grade will be S or U.
- GEOL 488. Senior Colloquium in Geology (4).** Prerequisite, senior standing or permission of instructor. Lecture, reading, and presentation of various topics in geology. Three hours lecture plus three hours of discussion per week.
- GEOL 489. Geologic Field Methods (6-12).** Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB, GEOL 200, GEOL 360. Emphasis is placed on observation and recording of lithologic and structural features, measurement of stratigraphic and structural sections, applications of various survey methods, and plotting geologic data on topographic and aerial photographs in the field. The class will be offered during summer or winter break, or as arranged by the instructor. Credits will be carried in concurrent or immediately subsequent academic year quarter. Extra fees required.
- GEOL 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- GEOL 491. Workshop (1-6).**
- GEOL 492A. Experience Teaching Upper Level Geology (2).** Prerequisite, permission of instructor. Assisting with instruction in upper level Geology major lab or field courses. May be repeated once for the same course, and up to a total of four times. Grade will be S or U. Formerly GEOL 493.
- GEOL 492B. Laboratory Experience Teaching Earth Science (2).** Prerequisite, GEOL 101 or GEOL 102 and GEOL 101LAB or permission of the instructor. Course designed for future Earth Science teachers in secondary schools. Assist teaching one laboratory section of GEOL 101LAB and discuss laboratory teaching methods. Grade will be S or U. Formerly GEOL 394.
- GEOL 494. Applied GIS Project (2-6).** Prerequisite, ANTH/GEOG 215 and permission of instructor. GIS projects in Anthropology, Biology, Geography, Geology, and Resource Management. May be repeated by permission of department chair. GEOL 494, ANTH 494 and GEOG 494 are equivalent courses. Formerly GEOL 492.
- GEOL 495. Senior Research (1-6).** By permission only. May be repeated up to 12 credits.
- GEOL 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- GEOL 498. Special Topics (1-6).**
- GEOL 499. Seminar (1-5).**

GERONTOLOGY

Faculty

Director: Jeff Penick
Psych Bldg 461

Faculty Associates

Joan Amby, Assistant Professor of Family Studies
Melody Madlem, Assistant Professor of Health Education & Leisure Services
Phillip W. Mattocks, Adjunct Professor of Biological Sciences
Jeffrey M. Penick, Assistant Professor of Psychology
Elizabeth M. Street, Professor of Psychology

General Departmental Information

The Department of Psychology coordinates the interdisciplinary Gerontology major leading to the Bachelor of Science degree as well as a Gerontology minor for students majoring in other fields of study. The major, which includes both theoretical and practical components, is designed for students who wish to pursue a career in service to older people or who wish to learn more about this increasingly important segment of the population. Field experience in public or private agencies concerned with the elderly is a part of the major.

The major prepares students for a variety of professional and para-professional employment opportunities in community education, government agencies, senior centers, nursing homes, retirement villages, hospitals, personnel and business administration, and retirement programs. Prereq-

quisites for the major: for FCSF 435, prerequisite FCSF 234 or permission; for FCSN 441, prerequisite FCSN 245; for PSY 452, PSY 313 or 314 recommended.

Bachelor of Science

Gerontology Major 46 credits (3715)

Gerontology Major 60 credits (3720)

Students may choose either a 46 credit major (3715) or a 60 credit major (3720).

Required Courses	Credits
BIOL 201, Human Physiology	5
PSY 300, Research Methods in Psychology OR SOC 465, Methods of Social Research	5
SOC 325, Aging	4
HED 412, Health Aspects of Aging	3
FCSF 435, Family Gerontology	4
PSY 452, Adult Development and Aging	4
PSY 454, The Helping Interview	3
BIOL 456, Biology of Aging	3
GERO 490, Field Experience	12
Department approved Electives	3 or 17
SOC 320, Death and Dying (5)	
SOC 327, Sociology of Health (4)	
SOC 330, Sociology of Leisure (5)	
SOC 373, Social Groups (5)	
POSC 320, Public Administration (5)	
POSC 325, Introduction to Public Policy (3)	
PSY 455, Behavioral Medicine and Health Psychology (4)	
FCSN 441, Nutrition and Aging (3)	
ADMG 371, Administrative Management (4)	
HED 410, Community Health (3)	
GERO 496, Individual Studies (1-6)	
Other Department approved electives	

Total 46 or 60

To complete the 46 credit major, you must complete an additional major or a minor in one of the following areas:

Business Administration
Community Health Education
Family and Consumer Sciences (concentration in Family Studies and/or Nutrition only)
Recreation and Tourism
Psychology
Sociology

Gerontology Minor (3720)

Required Courses	Credits
PSY 452, Adult Development and Aging	4
SOC 325, Aging	4
FCSF 435, Family Gerontology	4
Department approved electives from the following:	8
BIOL 201, Human Physiology (5)	
HED 410, Community Health (3)	
HED 412, Health Aspects of Aging (3)	
PSY 454, The Helping Interview (3)	
PSY 455, Behavioral Medicine and Health psychology (4)	
BIOL 456, Biology of Aging (3)	
SOC 320, Death and Dying (5)	
SOC 327, Sociology of Health (4)	
SOC 330, Sociology of Leisure (5)	
SOC 373, Social Groups (5)	
POSC 320, Public Administration (5)	
FCSN 441, Nutrition and Aging (3)	
Other Department approved electives	

Total 20

Gerontology Courses

- GERO 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- GERO 491. Workshop (1-6).**
- GERO 496. Individual Study (1-6).** Prerequisite, permission of instructor and Department Chair.
- GERO 498. Special Topics (1-6).**
- GERO 499. Seminar (1-5).** Prerequisite, permission of instructor and Department Chair.
- GERO 499.1. Capstone Seminar (3).** Prerequisites, senior standing and permission of instructor. A summary review, analysis and integration of issues in Gerontology and evaluation of student's program.

HEALTH, HUMAN PERFORMANCE AND RECREATION

Faculty

Chair: Robert McGowan
Physical Education Building 107

Professors

Kenneth Briggs, Health Education - Pedagogy
Leo D'Acquisto, Exercise Science
Stephen C. Jefferies, Physical Education - Pedagogy
Andrew Jenkins, Health Education
Vincent Nethery, Exercise Science
William Vance, Recreation Management

Associate Professors

Melody Madlem, Health Education
Barbara Masberg, Recreation and Tourism
Kirk E. Mathias, Physical Education, Pedagogy

Assistant Professors

Carolyn Booth, Paramedics
Tim Burnham, Exercise Science
Dorothy Chase, Recreation and Tourism
Harry Papadopoulos, Exercise Science

Lecturers

Debra D'Acquisto, PE Activities, Exercise Science
Mark Perez, Health Education
Tim Riles, Physical Education Pedagogy
Therese Young, Dance

Emeritus Professor

Walter Arlt, Physical Education
Gary Frederick, Physical Education-Administration

General Departmental Information

The Department of Health, Human Performance and Recreation has many programs which lead to the Bachelor of Science or Bachelor of Arts degree. In addition to professional preparation in exercise science, school and community health, physical education, paramedic studies, and recreation and tourism management, the Department also encourages students to develop skills in physical activities that will enable them to enjoy fitness, health, and recreational activities.

Health, Human Performance and Recreation Programs

Bachelor of Science

Physical Education (6100)

Physical Education: Teaching K-12 (6101)

Health Fitness Endorsement

Program Director: Stephen C. Jefferies

Program Advisors:

Ken Briggs, Health Endorsement
Kirk Mathias, PE Pedagogy

This major satisfies the endorsement for Health/Fitness.

Admission Requirements

Students may enter the Physical Education major in either the fall or winter quarters. Fall quarter admittance is recommended. Graduating Students may receive an endorsement in Health & Fitness. Students complete the Physical Education major as part of a cohort group. Students considering this major should contact the PE Program Director before beginning the program. The following additional requirements also apply:

1. Classes in this major are organized over 6-quarters and must be taken in sequence.
2. Students who receive less than a C grade in any classes that are prerequisites for others will not be permitted to continue in the major
3. The teaching major (6101) qualifies students for teaching, supervising and coordinating physical education and health education in K-12 public schools.
4. Students taking this major who plan to teach in Washington State public schools are required to complete the professional education program requirements offered through the Curriculum and Supervision department.
5. Students may also graduate with a non-teaching B.S. degree in Physical Education (6100).
6. All students must complete a professional portfolio prior to beginning student teaching. Non-teaching majors must complete the portfolio prior to graduation
7. Professional dress requirements apply to many classes in this major. Students must comply with these requirements to participate in the program.

See the Health, Human Performance and Recreation Program Web site for more information:

<http://www.cwu.edu/~pehls/pe.htm>

For the major application procedure, contact the Physical Education Program Director.

Required Courses	Credits
EMS 245, First Aid	3
PE 280, Professional Foundations	3
PE 340A, PE Teaching Practicum I	1
PE 340B, PE Teaching Practicum II	2
PE 340C, PE Teaching Practicum III	2
PE 340D, PE Teaching Practicum IV	3
PE 341A, Pedagogical Foundations of PE I	3
PE 341B, Pedagogical Foundations of PE II	3
PE 341C, Pedagogical Foundations of PE III	3
PE 342A, Movement Analysis and Application I	4
PE 342B, Movement Analysis and Application II	4

PE 342C, Movement Analysis and Application III	6
PE 342D, Movement Analysis and Application IV	4
EXSC 250, Anatomical Kinesiology	5
EXSC 351, Scientific Foundations of Health and Fitness	5
EXSC 463, Pediatric Issues in Exercise Science	5
HED 101, Health Essentials	4
HED 210, Drugs and Health	3
HED 230, Foundations of Health Education	3
HED 324, Noninfectious Disease	4
HED 345, School Health Curriculum Materials	3
HED 422, Methods for Health Promotion	4
HED 445, Health Education Professionalism ..	1
Total	78

Bachelor of Science**Exercise Science Major (3290)**

Program Director: Vincent M. Nethery, Ph.D.

Program Advisors:

Dr. Leo D'Acquisto
Dr. Tim Burnham
Dr. Harry Papadopolus

The Exercise Science major prepares students to meet the theoretical and practical requirements necessary to evaluate and plan exercise programs for diverse populations, and to pursue certifications necessary for entry into, and advancement within, various health and fitness employment settings. Exercise Science major graduates work in adult and corporate fitness programs of business, industry, public agencies, and schools. In addition, there are also career opportunities in sectors including fitness clubs, cardiac rehabilitation programs, wellness centers, obesity clinics, and physical/occupational therapy clinics.

Admission Requirements

Admission to the Exercise Science major is selective. Students wishing to attain full admission must meet the following requirements:

Successful completion of the following courses: EMS 245, EXSC 250, EXSC 254.

Students must be admitted to the Exercise Science major prior to enrolling in 300 or above level courses in the Exercise Science major. Students must receive a grade of C (2.0) or better in all of the major courses.

For the major application procedure, contact the Exercise Science program director.

Required Courses	Credits
IT 101, Computer Applications	3
FCSN 245, Basic Nutrition	5
EMS 245, First Aid	3
EXSC 250, Anatomical Kinesiology	5

EXSC 254, Foundations of Fitness	3
HED 324, Noninfectious Disease	4
EXSC 348, Prevention and Treatment of Athletic Injuries	4
EXSC 351, Scientific Foundations of Health and Fitness	5
COM 345, Business and Professional Speaking OR COM 250, Public Speaking: Practice and Criticism	4
EXSC 450, Physiology of Exercise	5
EXSC 318, Aerobic Fitness	3
EXSC 360, Principles of Strength Training	4
EXSC 446, Sports Nutrition and Weight Control	3
EXSC 455, Fitness Assessment and Exercise Prescription	5
EXSC 456, Administration of Programs for Special Populations	4
EXSC 457, Exercise Adherence Strategies	3
EXSC 461, Current Issues in Fitness and Exercise Science	2
EXSC 464, Management of Fitness Facilities and Programs	4
EXSC 495A, Fitness Centers/Clubs OR EXSC 495B, Cardiac Rehabilitation OR EXSC 495C, Geriatrics	2
EXSC 495D, Fitness Assessment Laboratory ..	2
EXSC 490, Internship	10-12
Total	83-85

Bachelor of Science**Paramedic Major (6020)**

Purser Paramedic Program (EMS Education)

Program Director: Carolyn Booth
Medical Program Director: Dr. Jackson Horsley, M.D.

The Paramedic major is designed for students who plan to become a certified prehospital professional in emergency medical services.

The curriculum includes classroom lectures, group discussions, laboratory skills training, hospital clinical experience with observations and practice, simulated exercises and on-the-job training with an advanced life support service which will fully prepare the student for occupations related to advanced emergency medical services. This major is not for students interested in physicians assistant programs. This nationally accredited program meets all the national curriculum and State of Washington standards.

In addition to general admissions, all applicants must meet entrance criteria (State EMT certification and prehospital experience) and be approved by the paramedic screening committee before being admitted into the program. AA degree or two years college experience recommended.

Completion of the major listed below and other degree requirements leads to the Bachelor of Science Paramedic degree and eligibility to take the National Registry EMT-P examination for paramedic certification. For students not seeking a degree a certification option is available.

Required Courses	Credits
EMS 245, First Aid	3
EMS 319, Emergency Medical Technician.....	8
EMS 335, Introduction to Paramedic Training	3
EMS 336, Paramedic Clinical Training I.....	3
EMS 337, Paramedic Clinical Training II.....	3
EMS 345, Instructor's First Aid.....	3
EMS 440, Medical Measurements and Terminology.....	2
EMS 441, General Pharmacology for Paramedics.....	3
EMS 443, Myocardial Disease and Arrhythmia Diagnosis.....	3
EMS 444, Principles and Therapeutics of Advanced Life Support.....	3
EMS 450, Human Anatomy Laboratory.....	1
EMS 451, Trauma For Advanced Life Support.....	3
EMS 459, Emergencies in Pediatric/Geriatric Care.....	3
EMS 493, Practicum in Paramedic Training.....	12
BIOL 355, Anatomy/Physiology I.....	5
BIOL 356, Anatomy/Physiology II.....	5
Total	63

Physical Education Minors

For minor application procedure, contact the Physical Education Program Director.

Athletic Training Minor (1555) (non certified program)

This minor provides students with many of the experiences needed to become an athletic trainer. It does not however qualify students as a National Athletic Training Association (NATA) certified Athletic Trainer. Students interested in becoming NATA certified should contact the NATA for more information

Required Courses	Credits
HED 101, Health Essentials.....	4
FCSN 245, Basic Nutrition.....	5
EMS 245, First Aid.....	3
EXSC 250, Anatomical Kinesiology.....	5
EXSC 348, Prevention and Treatment of Athletic Injuries.....	4
EXSC 351, Scientific Foundations of Health and Fitness.....	5
EXSC 438, Therapeutic Exercise.....	3
EXSC 450, Physiology of Exercise.....	5
EXSC 452, Advanced Athletic Training.....	3
Total	37

Dance Minor (2185)

Program Coordinator: Therese Young

The Dance Minor is designed for students who wish to broaden their academic background and receive a well-rounded dance education, thus preparing them to teach dance and/or dance activities in a wide variety of settings.

Students will be required to complete both coursework and technique classes in those areas of dance frequently taught in a K-12 setting. Additionally, students will develop competencies in choreography, rhythmic concepts, dance production and teaching.

Requirement: Minimum of one year active membership in Orchesis.

Required Courses	Credits
PED 116, Beginning Folk Dance.....	1
PED 118, Beginning Ballroom Dance.....	1
PED 161, Cultural History of Dance.....	4
PED 201A, Modern Dance I.....	2
PED 201B, Modern Dance II.....	2
PED 202A, Ballet I.....	2
PED 211, Music for Dance - Rhythms and Resources.....	2
PED 302, Dance Production.....	3
PED 309, Teaching Methods: Recreational Dance.....	3
PED 314, Dance for Children.....	3
Department approved electives.....	4
Total	27

Dance: Teaching Minor (2190)

Program Coordinator: Therese Young

Requirement: Minimum of one year active membership in Orchesis.

This minor satisfies the endorsement for Dance.

Required Courses	Credits
PED 161, Cultural History of Dance.....	4
PED 201A, Modern Dance I.....	2
PED 201B, Modern Dance II.....	2
PED 202A, Ballet I.....	2
PED 211, Music for Dance - Rhythms and Resources.....	2
EXSC 250, Anatomical Kinesiology.....	5
PED 301, Choreography.....	3
PED 302, Dance Production.....	3
PED 309, Teaching Methods: Recreational Dance.....	3
PED 314, Dance for Children.....	3
PED 315, Teaching Methods: Modern Dance and Ballet (3) OR	
PE 303, Teaching Methods: Basic Skills (3).....	3
PED 116, Beginning Folk Dance.....	1
PED 118, Beginning Ballroom Dance.....	1

Total Endorsement Credits 34

Coaching Minor (1950)

Students are recommended to obtain state teaching certification for permanent employment coaching opportunities.

The Coaching Minor course of study at Central Washington University meets the standards of the Washington Interscholastic Athletic Association regarding recommended standards for employment at the preferred Coach Level. Requirements (Item 23.4.1, W.I.A.A. Handbook) for all levels listed below.

These levels are:

- Beginning Coach
- Experienced Coach
- Preferred Coach

Students selecting this minor must complete EXSC 351 as a prerequisite to EXSC 450. This course of study qualifies the student to be certified by the W.I.A.A. at the preferred coaching level.

Required Courses	Credits
EMS 245, First Aid.....	3
EXSC 250, Anatomical Kinesiology.....	5
PE 341A, Pedagogical Foundations I.....	3
PE 340B, Practicum II.....	2
EXSC 348, Prevention and Treatment of Athletic Injuries.....	4
EXSC 351, Scientific Foundations of Health and Fitness.....	5
PE 453, Psychology and Sociological Foundations of Coaching.....	3
PE 346, Administration of Athletics.....	3
HED 205, Drugs and Sports.....	2
Electives.....	6
PE 442 Field Work in Physical Education (3)	
PE 321, Football Coaching (3)	
PE 322, Wrestling Coaching (3)	
PE 323, Basketball Coaching (3)	
PE 324, Track Coaching (3)	
PE 325, Baseball Coaching (3)	
PE 329, Tennis Coaching (3)	
PE 330, Volleyball Coaching (3)	
PE 333, Swimming Coaching (3)	
PE 521, Advanced Football Coaching (3)	
PE 523, Advanced Basketball Coaching (3)	
PE 524, Advanced Track Coaching (3)	
PE 525, Advanced Baseball Coaching (3)	

Total 36

Exercise Science Minor (3290)

Program Director: Vincent Nethery, Ph.D.

Required Courses	Credits
EXSC 250, Anatomical Kinesiology.....	5
EXSC 254, Foundations of Fitness.....	3
EXSC 351, Scientific Foundations of Health and Fitness.....	5
EXSC 450, Physiology of Exercise.....	5
EXSC 455, Fitness Assessment and Exercise Prescription.....	5
Select from one of the following.....	3-4

- EXSC 360, Scientific Principles of Strength Training (4)
 EXSC 456, Exercise Programming for Special Populations (4)
 EXSC 457, Exercise Adherence Strategies (3)

Total 26-27

Health, Human Performance and Recreation Courses

Paramedic Courses

- EMS 245. First Aid (3). American Red Cross First Aid Course for which standard certificate may be granted. Formerly PE 245. Students may not receive credit for both.
- EMS 319. Emergency Medical Technician (EMT) (8). Prerequisite, EMS 245 and attained CPR certification for the Professional Rescuer or equivalent. EMT-Basic is the first certification level for students pursuing careers in the EMS field. After completing the EMS 319 course, students are eligible to become state or nationally certified to care for the sick and injured in the pre-hospital setting. Formerly PE 319. Students may not receive credit for both.
- EMS 335. Introduction to Paramedic Training (2). Prerequisites, EMS 319 and permission. Patient care skills, new equipment for patient treatment, medical-legal requirements. Formerly PE 335. Students may not receive credit for both.
- EMS 336. Paramedic Clinical Training I (3). Prerequisites, BIOL 356, EMS 335 and permission. Intensive training in Asepsis Procedures, CPR, Dog Lab I, IV Team, Morgue, Operating Room, Recovery Room, Respiratory Laboratory, and Shock Treatment. Formerly PE 336. Students may not receive credit for both.
- EMS 337. Paramedic Clinical Training II (3). Prerequisites, BIOL 356, EMS 336 and permission. Intensive training in Cardiac Catheterization Laboratory, Cardiology, Dog Lab II, Emergency Room, Endotracheal Suctioning, Medication, Mobile Telemetry, Obstetrics, and Pediatrics. Formerly PE 337. Students may not receive credit for both.
- EMS 345. Instructor's First Aid (3). Prerequisite, EMS 245 or instructor's permission. American Red Cross First Aid course for instructor's certificate. Meets requirements for ski patrol. Formerly PE 345. Students may not receive credit for both.
- EMS 440. Medical Measurements and Terminology (2). Prerequisites, EMS 319 and permission of instructor. Specialized medical terminology, medical weights and measurements. Spelling, pronunciation, and workable definition of commonly used medical words. Formerly PE 440. Students may not receive credit for both.

EMS 441. General Pharmacology for Paramedics (3). Prerequisite, EMS 440. Mechanism of action, indications and contraindications of drugs, their side effects, and dosage and administration. Formerly PE 441. Students may not receive credit for both.

EMS 443. Myocardial Disease and Arrhythmia Diagnosis (3). Prerequisite, BIOL 356. Study of conduction abnormalities of the heart and rhythm interpretation. Permission only. Formerly PE 443. Students may not receive credit for both.

EMS 444. Principles and Therapeutics of Advanced Life Support (3). Prerequisite, EMS 443. Treatment protocols, decision making with cardiac emergencies, integration of knowledge and skills of previous class content. Follow-up procedures involving drugs, defibrillation and oxygen therapy. Permission only. Formerly PE 444. Students may not receive credit for both.

EMS 450. Human Anatomy-Cadaver (1). Prerequisite, BIOL 355 and 356 or EXSC 250 and 351. A study of human anatomy from a systemic perspective using the cadaver as the learning medium. Oriented to students in emergency medicine and health science programs. Two hour laboratory per week. Formerly PE 250.1. Students may not receive credit for both.

EMS 451. Trauma for Advanced Life Support (3). Prerequisite, EMS 319. Trauma and related topics is a comprehensive course that provides an essential overview of care of the patient who has sustained accidental injury. Formerly PE 451. Students may not receive credit for both.

EMS 459. Emergencies in Pediatric/Geriatric Care (3). Emergency training in assessing, treating and transporting pediatric/geriatric patients. Formerly PE 459. Students may not receive credit for both.

EMS 493. Practicum in Paramedic Training (3-12). Prerequisites, EMS 444 and permission of instructor. Experience in the following: hospital, ambulance, emergency room, ICU/CCU. Paramedic majors must complete 12 credits. Grade will be S or U. Formerly PE 493.

Exercise Science Courses

EXSC 250. Anatomical Kinesiology (5). Study of skeletal and muscular systems, the fundamentals of biomechanics, and their applications to human movement, skill development and skill performance. Formerly PE 250. Students may not receive credit for both.

EXSC 254. Foundations of Fitness (3). Overview of the Fitness Industry, components of fitness and strategies to improve the health and well-being of the individual. Formerly PE 254 and PE 354.

Students may not receive credit for more than one.

EXSC 318. Aerobic Fitness (3). Prerequisites, EXSC 250. This class provides the Fitness and Sports Management major with an in-depth exploration of various cardiovascular exercise activities and equipment. Formerly PE 318. Students may not receive credit for both.

EXSC 348. Prevention and Treatment of Athletic Injuries (4). Prerequisite, EXSC 250. Prevention and treatment of injuries and rehabilitation of injured athletes. Three hours lecture and two hours laboratory per week. Formerly PE 348. Students may not receive credit for both.

EXSC 351. Scientific Foundations of Health and Fitness (5). Examination of the digestive, respiratory, urinary, circulatory, nervous, endocrine, and reproductive systems of the human body. Four hours lecture and two hours laboratory per week. Formerly PE 351. Students may not receive credit for both.

EXSC 360. Scientific Principles of Strength Training (4). Prerequisites, EXSC 250 or permission. This course addresses the scientific and theoretical bases of program design in resistance training. Formerly PE 360. Students may not receive credit for both.

EXSC 438. Therapeutic Exercise (3). Prerequisites, EXSC 250 and EXSC 348. This course covers the understanding, design and development of rehabilitation exercises for acute, chronic and post operative injuries. Formerly EXSC 438. Students may not receive credit for both.

EXSC 446. Sports Nutrition and Weight Control (3). Prerequisite, FCSN 245 or permission. Study of interrelationship of factors required for successful weight control; modification of diet, activity, and behavior. Role of dietary factors in health and body function. Formerly PE 446. EXSC 446 and FCSN 446 are equivalent courses. Students may not receive credit for both.

EXSC 450. Physiology of Exercise (5). Prerequisite, EXSC 351 or permission. Acute and chronic responses of the metabolic, muscular, cardiovascular, pulmonary, endocrine, and thermoregulatory systems to physical work. Four hours lecture, two hours laboratory per week. Formerly PE 450. Students may not receive credit for both.

EXSC 452. Advanced Athletic Training (3). Prerequisite, EXSC 348. A detailed examination of injuries, therapeutic modalities, and rehabilitation in athletic training. Formerly PE 452. Students may not receive credit for both.

EXSC 455. Fitness Assessment and Exercise Prescription (5). Prerequisite, EXSC 254. Concepts and principles of appraising level of fitness, evaluating the results and designing physical fitness/exercise programs. Three hours lecture and four

hours laboratory. Formerly PE 455. Students may not receive credit for both.

EXSC 456. Administration of Programs for Special Populations (4). Prerequisite, EXSC 455. Philosophy, principles, policies and procedures of fitness administration to special populations. Formerly PE 456. Students may not receive credit for both.

EXSC 457. Exercise Adherence Strategies (3). Review of psychological factors involved in the exercise treatment of normal and special populations. Formerly PE 457. Students may not receive credit for both.

EXSC 461. Current Issues in Fitness and Exercise Science (2). This seminar course discusses current trends and issues in the fitness and exercise science world. Formerly PE 461. Students may not receive credit for both.

EXSC 463. Pediatric Issues in Exercise Science (5). Prerequisites, EXSC 250 and EXSC 351. Essential principles of growth, development and exercise science and the application of these principles to children and youth. Four hours of lecture and two hours of laboratory per week. Formerly PE 463. Students may not receive credit for both.

EXSC 464. Management of Fitness Facilities and Programs (4). Prerequisites, EXSC 355 and EXSC 456. This course covers conventional business management principles and operational guidelines to the unconventional business of health and fitness facilities. Formerly PE 464. Students may not receive credit for both.

EXSC 490. Cooperative Education (1-12). Prerequisites: 1) satisfactory completion of practica; 2) a minimum GPA of 2.7 in the major. An individualized contracted field experience with business, industry, government, medical, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly PE 490.

EXSC 495A. Practicum in Fitness Centers/Clubs (2). Prerequisite, EXSC 455. Observation of and assistance in fitness programs. Grade will be S or U. Formerly PE 495.1.

EXSC 495B. Practicum in Fitness: Cardiac Rehabilitation (2). Prerequisite, EXSC 455. Observation, monitoring and supervised leadership of fitness activity applied to physician referred adults. Grade will be S or U. Formerly PE 495.2.

EXSC 495C. Practicum in Fitness: Geriatric Fitness (2). Prerequisite, EXSC 455. Observation, monitoring, and supervised leadership of fitness programs applied to the elderly. Grade will be S or U. Formerly PE 495.3.

EXSC 495D. Practicum in Fitness: Laboratory Assessment (2). Prerequisite, EXSC 455. Practical application of testing procedures in cardiovascular fitness, body composition, muscular fitness and flexibility. Grade will be S or U. Formerly PE 495.4.

Physical Education Courses

PE 280. Professional Foundations of Physical Education (3). Introduction and orientation to the profession.

PE 298. Special Topics (1-6).

PE 300. Teaching Designs in Physical Education (4). Methodology of subject presentation and organization of teaching content. Three hours lecture and two hours laboratory per week.

PE 303. Basic Skills/Lead-Up Activities (3). Prerequisite, PE 300. The development and practice of basic motor patterns, elementary and complex physical skills, and organized physical activities appropriate for instruction in elementary school physical education. Two hours lecture and two hours laboratory per week.

PE 304. Teaching Methods: Soccer/Track and Field (3). Prerequisites, PE 300 and PETS 113 or permission. Knowledge of skills and the teaching of soccer and track and field. Two hours lecture and two hours laboratory per week.

PE 305. Teaching Methods: Racquet Sports (3). Prerequisites, PE 300, PEID 110, PEID 136, and PEID 123 or permission. Knowledge of skills and the teaching of badminton, handball, pickleball, racquetball, and tennis. Two hours lecture and two hours laboratory per week.

PE 306. Teaching Methods: Basketball/Volleyball (3). Prerequisites, PE 300 PETS 110 and PETS 116 or permission. Knowledge of skills and the teaching of basketball and volleyball. Two hours lecture and two hours laboratory per week.

PE 307. Teaching Methods: Fitness Activities (3). Prerequisites, PE 300, PEF 113, PEF 110, PEF 121 and PEAQ 111 or permission. Knowledge of skills and the teaching of indoor and outdoor fitness activities. Two hours lecture and two hours laboratory per week.

PE 308. Teaching Methods: Tumbling/Stunts/Gymnastics (3). Prerequisites, PE 300, PEGT 110 or PEGT 112 or permission. Knowledge of skills and the teaching of tumbling/stunts/gymnastics. Two hours lecture and two hours laboratory per week.

PE 313. Alternative Physical Education Activities (3). Prerequisite, PE 300. Non-traditional games and activities taught in public school physical education curriculums. Two hours lecture and two hours laboratory per week.

PE 321. Football Coaching (3).

PE 322. Wrestling Coaching (3).

PE 323. Basketball Coaching (3).

PE 324. Track Coaching (3).

PE 325. Baseball Coaching (3).

PE 329. Tennis Coaching (3).

PE 330. Volleyball Coaching (3).

PE 333. Swimming Coaching (3).

***PE 334. Physical Education Activities for the Elementary School (3).** Selection, organization, and presentation of physical education activities in the elementary school.

*Enrollment is subject to being fully admitted to the Teacher Education Program.

PE 340A. PE Teaching Practicum I (1). Prerequisite, pre-major status in PE or permission. Students will observe and assist in PE classes at elementary and secondary levels in a local school for 4 hours/week throughout the quarter. Formerly PE 340.1. Students may not receive credit for both.

PE 340B. PE Teaching Practicum II (2). Prerequisite PE 340A or permission. Physical education teaching practicum. Formerly PE 340.2. Students may not receive credit for both.

PE 340C. PE Teaching Practicum III (2). Prerequisite, PE 340B or permission. Practicum will consist of two parts: 1) Assist in a PE class in Yakima or Wenatchee for 2 hours/week. 2) Plan and instruct at the Ellensburg 8th grade honor's camp. Formerly PE 340.3. Students may not receive credit for both.

PE 340D. PE Teaching Practicum IV (3). Prerequisite, PE 340C or permission. Physical education teaching practicum. Formerly PE 340.4. Students may not receive credit for both.

PE 341A. Pedagogical Foundations of PE I (3). Prerequisite, PE or Health Education majors only. Examination of selected pedagogical principles and their impact on the teaching of human movement. Formerly PE 341.1. Students may not receive credit for both.

PE 341B. Pedagogical Foundations of PE II (3). Prerequisite, PE 341A or permission. Examination of selected pedagogical principles and their impact on the teaching of human movement. Formerly PE 341.2. Students may not receive credit for both.

PE 341C. Pedagogical Foundations of PE III (3). Prerequisite, PE 341B or permission. Examination of specific pedagogical principles and their impact on the teaching of human movement. Formerly PE 341.3. Students may not receive credit for both.

PE 342A. Movement Analysis and Application I (4). Prerequisite, PE or Health major or permission. Instruction in the analysis and teaching of locomotor and non-locomotor skills. Formerly PE 342.1. Students may not receive credit for both.

PE 342B. Movement Analysis and Application II (4). Prerequisite, PE 342A or permission. Identify critical components in manipulative movements. Examination of propulsive and receptive manipulative movements in a variety of application activities. Formerly PE 342.2. Students may not receive credit for both.

PE 342C. Movement Analysis and Application III (6). Prerequisite, PE 342B or permission. Identify critical components of selected outdoor pursuits, challenge activities, team sports and field events. Formerly PE 342.3. Students may not receive credit for both.

PE 342D. Movement analysis and Application IV (4). Prerequisite, PE 342C or permission. Identify critical components in striking activities. Examination of striking movements in a variety of application activities. Formerly PE 342.4. Students may not receive credit for both.

PE 346. Administration of Athletics (3).

PE 347. Advanced First Aid (3). Prerequisite, EMS 245. American Red Cross and State Industrial First Aid course for which an advanced certification may be granted.

PE 352A. Officiating: Hockey/Volleyball (2). Formerly PE 352.1. Students may not receive credit for both.

PE 352B. Officiating: Basketball (2). Formerly PE 352.2. Students may not receive credit for both.

PE 355. Outdoor Pursuits (2). Prerequisite, PE 300. Course is limited to students pursuing the K-12 physical education teaching endorsement. Introduction to planning and instruction of selected outdoor pursuits suitable for inclusion in K-12 PE curriculums.

PE 361. Physical Education for the Handicapped (3). Review of the major physical handicaps; planning the physical education program for these conditions.

PE 362. Dance in Education (4).

PE 398. Special Topics (1-6).

PE 442. Field Work in Physical Education (1-6). Class to be arranged by college supervisor. Grade will be S or U. May be repeated.

PE 447. Physical Education Equipment and Facilities (3). Knowledge relating to purchase and care of equipment; planning of areas and facilities for athletics, recreation and physical education.

PE 448. Ethics in Sports (3). Ethical considerations involved in coaching, playing and administering sports.

PE 449. Past and Current Concepts in Physical Education (3). The historical background of physical education and sport; their roles in society and education.

PE 453. Psychological and Sociological Foundations of Coaching (3). Investigation

of factors affecting individual and group behavior in the coaching of interscholastic sports.

PE 454. Motor Learning Theories (3). Theories dealing with factors which affect individual performance and learning differences in relation to human movement and skill learning. Two hours lecture and two hours laboratory per week.

PE 458. Measurement and Evaluation in Physical Education (3). The construction and use of tests which are unique to the field of physical education; physical fitness tests, skill tests, knowledge tests, attitude tests and medical tests.

PE 466. Supervision and Evaluation of Program (3).

PE 468. Philosophy and Physical Education (4). Consideration of the significance and meaning of philosophic processes and their relationship to movement and behavior.

PE 471. Philosophy of Elementary School Physical Education (3).

PE 475. Racism in Sport (3). The study of how racism may manifest itself psychologically, sociologically, and politically in the realm of sport.

PE 481. Organization of Physical Education and Intramurals (3). The nature, processes, and philosophy of physical education and intramural sports.

PE 484. Legal Liability and Risk Management (3). Aspects of personnel law and premises liability in public, private and "not for profit" education, human and social services organizations. Procedures for managing risks. Open to Recreation and Tourism Management and Physical Education majors, and HHPR graduate students only. PE 484 and RT 484 are equivalent courses. Formerly LES 484/PE 460. Students may not receive credit for more than one.

PE 485. Physical Growth and Motor Development (3). Prerequisites, EXSC 450 and PE 454. Study of patterns of physical growth and motor development that affect the learning and performance of physical skills from birth through senescence.

PE 491. Workshop Clinic (1-6). Letter grades or S or U grades may be given at the option of the Physical Education Department.

PE 492. Practicum (1-4). Prerequisite, permission of elementary physical education advisor. Practical experience working with children in physical education activities. May be repeated for credit. Four credits required in major.

PE 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

PE 498. Special Topics (1-6).

PE 499. Seminar (1-5). May be repeated.

Aquatics Courses

PEAQ 110. Springboard Diving (1).

PEAQ 111. Beginning Swimming (1).

PEAQ 112. Intermediate Swimming (1). Prerequisite, must be able to swim 50 yards.

PEAQ 113. Advanced Swimming (1). Prerequisite, ability to swim 200 yards continuously, employing at least three strokes. Refinement of standard strokes and dives.

PEAQ 114. Swim Conditioning (1). Prerequisite, must be an intermediate swimmer.

PEAQ 116. Water Polo (1). Prerequisite, must be an intermediate swimmer.

PEAQ 118. Aquacises (1). Designed to increase the physical fitness of individuals through water exercises and jogging. Open to both swimmers and non-swimmers.

PEAQ 198. Special Topics (1).

PEAQ 221. Lifeguard Training (3) Prerequisites, PEAQ 113 or permission. American Red Cross approved course for which certification may be granted. The course will include rescue technique, preventative lifeguarding and conditioning. Two hours lecture and One hour laboratory per week. Formerly PE 221. Students may not receive credit for both.

PEAQ 222. Lifeguard Training Instructor (2). Prerequisites, PE 221 and current American Red Cross lifeguard training certificate. Certify students to teach the American Red Cross Basic Water Safety course, Emergency Water Safety course, lifeguard training and lifeguard training review. One hour lecture and two hours laboratory per week. Formerly PE 222. Students may not receive credit for both.

PEAQ 320. Water Safety Instructor (3). Prerequisite, intermediate swimmer. Students satisfactorily passing the Red Cross requirements will receive a Red Cross Water Safety Instructors Certificate. Two hours lecture and two hours laboratory per week. Formerly PE 320. Students may not receive credit for both.

Dance Courses

PED 112. Dance Rehearsal and Performance. (1-3). Open to individuals participating in performances of Orchesis Dance Company. May be repeated for credit.

PED 113A. Beginning Jazz Dance (1). Formerly PED 113.1.

PED 113B. Jazz Dance II (1). Prerequisite, PED 113A or permission. Formerly PED 113.2.

PED 113C. Jazz Dance III (1). Advanced level jazz dance technique. Formerly PED 113.3.

PED 115. Tap Dance (1).

PED 116. Beginning Folk Dance (1). Traditional recreational dances of various countries.

- PED 117. Advanced Folk Dance (1).**
- PED 118. Beginning Ballroom Dance (1).**
- PED 119. Advanced Ballroom Dance (1).** Prerequisite, PED 118 or permission.
- PED 122. Tap Dance II (1).** Prerequisite, PED 115 or permission.
- PED 125. Theatre Dance (1).** Theatre Dance Skills and combinations.
- PED 130. Beginning Yoga (1).** May be repeated for credit.
- PED 131. Yoga Level II (1).** Prerequisite, PED 130. This class will review & refine techniques learned in the beginning yoga class, as well as further discussion and practice of yoga postures and other topics related to yoga.
- PED 161. Cultural History of Dance (4).** A survey course in the evolution of dance through the ages with emphasis on the major forces which have influenced dance in the 20th Century. Formerly PE 161. Students may not receive credit for both.
- PED 198. Special Topics.**
- PED 201A. Modern Dance I (2).** Basic modern dance techniques and beginning composition. One hour lecture; two hours laboratory per week. Formerly PE 201.1. Students may not receive credit for both.
- PED 201B. Modern Dance II (2).** Four hours of intermediate modern dance theory and technique. Experience in solo and group compositions. Formerly PE 201.2. Students may not receive credit for both.
- PED 201C. Modern Dance III (2).** Prerequisite, PED 201B. Four hours of advanced modern dance theory and techniques. Emphasis on performance and solo composition. Experience in organizing and presenting programs. Formerly PE 201.3. Students may not receive credit for both.
- PED 202A. Ballet I (2).** Beginning technique in classical ballet, including barre, center work and enchainments (center combinations). Formerly PE/PED 202.1. Students may not receive credit for both.
- PED 202B. Ballet II (2).** Prerequisite, PED 202A. Intermediate technique in classical ballet including barre, center work and enchainments (center combinations). Formerly PE/PED 202.2. Students may not receive credit for both.
- PED 202C. Ballet III (2).** Prerequisite, PED 202B. Advanced technique in classical ballet including barre, center work and enchainments (center combinations). Formerly PE/PED 202.3. Students may not receive credit for both.
- PED 211. Music for Dance - Rhythms and Resources (2).** Prerequisite, PED 201A. A study of rhythmic concepts as related to dance movements and composition; an introduction to music resources emphasizing composer/choreographer collaborations. Formerly PE 211. Students may not receive credit for both.

- PED 301. Choreography (3).** Prerequisite, PE 201A or instructor's permission. The study and practice of choreographic techniques and tools utilizing creative problem solving. Students will meet for two hours laboratory work each week plus two hours lecture. Formerly PE 301. Students may not receive credit for both.
- PED 302. Dance Production (3).** Aspects of organizing and mounting a dance production, including scheduling, programming, publicity, costuming, lighting, and sound design. Formerly PE 302. Students may not receive credit for both.
- PED 309. Teaching Methods: Recreational Dance (3).** Prerequisite, PED 116 or permission. Knowledge of skills necessary in the teaching of various forms of recreational dance styles. Two hours lecture and two hours laboratory per week. Formerly PE 309. Students may not receive credit for both.
- PED 314. Dance for Children (3).** Strategies for teaching dance in elementary education, including creative dance, rhythmic exploration, use of props, unit plan development, and methods of assessment. Formerly PE 314. Students may not receive credit for both.
- PED 315. Teaching Methods: Modern and Ballet Dance (3).** Prerequisites, PED 201A and PED 201B. Teaching methods for Modern and Ballet technique classes which emphasizes the development of critical and creative thinking skills, observation skills, and assessment skills. Formerly PE 315. Students may not receive credit for both.

Fitness Activities Courses

The purpose of the Physical Education Activity Program is to offer students an instructional program that utilizes physical movement as the primary educational medium. This program provides opportunities for students to develop and improve physical skills. In addition, students learn rules, terminology, proper technique and safety issues specific to each particular activity

Some of the following courses meet off-site.

Some of the following courses have minimal additional fees.

Check the current class schedule for specific dates and fees.

One credit (meets twice weekly)

- PEF 110. Conditioning Exercises.**
- PEF 111. Intermediate Conditioning Exercises.** Prerequisite, PEF 110 or permission.
- PEF 112. Ski Conditioning.**
- PEF 113. Weight Training.**
- PEF 114. Intermediate Weight Training.** Prerequisite, PEF 113 or permission.
- PEF 115. Jogging.**
- PEF 117. Weight Training.** Course is designed to enhance the student's knowledge and

practices of weight training. Course is oriented toward the development of strength with a particular athletic pursuit.

PEF 118. Military Conditioning. Physical conditioning activities designed to prepare the Army ROTC Advanced Course student for Advanced Camp and Air Force ROTC student for Field Training. For Army ROTC Advanced Course and Air Force ROTC students only.

PEF 119. Advanced Military Conditioning. Prerequisites, PEF 118 and instructor permission, meets three times weekly.

PEF 121. Step Aerobics.

PEF 122. Dance Aerobics.

PEF 123. Aerobic Walking. Assessment of present level of cardiorespiratory fitness and prescription of an individualized aerobic walking exercise program for increasing and maintaining fitness.

PEF 124. Distance Running.

PEF 125. Athletic Performance Conditioning.

PEF 126. Kick/Box Aerobics. Safe, effective aerobic work-out mimicking basic self-defense, and boxing movements.

PEF 128. Glute/Abdominal Conditioning. course emphasizes abdominal conditioning, gluteal toning and core muscle strengthening in a low impact format. Background music and various equipment is used for an effective workout.

PEF 129. Abdominal Strength Conditioning. Course emphasizes strengthening and conditioning the abdominals and core muscles for appearance and for performance. Use of equipment for fun and effectiveness.

PEF 130. Triathlon Training.

PEF 198. Special Topics.

Individual and Dual Sports Courses

One credit (meets twice weekly)

- PEID 110. Beginning Badminton.**
- PEID 113. Beginning Bowling.**
- PEID 114. Intermediate Bowling.** Prerequisite, PEID 113 or permission.
- PEID 115. Beginning Golf.**
- PEID 116. Intermediate Golf.** Prerequisite, PEID 115 or permission.
- PEID 117. Advanced Golf.**
- PEID 120. Beginning Fencing.**
- PEID 121. Intermediate Fencing.**
- PEID 122. Advanced Fencing.**
- PEID 123. Beginning Tennis.**
- PEID 124. Intermediate Tennis.** Prerequisite, PEID 123 or permission.
- PEID 125. Advanced Tennis.** Prerequisite, PEID 124 or permission.
- PEID 128. Beginning Skiing.**
- PEID 129. Intermediate Skiing.** Prerequisite, PEID 128 or permission.

- PEID 130. Cross Country Skiing.
- PEID 131. Snowshoeing.
- PEID 133. Backpacking.
- PEID 134. Bicycling.
- PEID 136. Pickleball/Racquetball.
- PEID 137. Hiking and Orienteering.
- PEID 138. Karate.
- PEID 139. Intermediate Karate. Prerequisite, PEID 138, or permission.
- PEID 140. Fly Fishing (1).
- PEID 145. Beginning Circus Arts (1). Introduction to juggling, unicycling and similar skills involving balance and coordination.
- PEID 146. Intermediate Circus Arts (1). Development of juggling, unicycling and similar skills involving balance and coordination.
- PEID 198. Special Topics.

Gymnastics and Tumbling Courses

- One credit (meets twice weekly)
- PEGT 112. Beginning Tumbling.
 - PEGT 113. Intermediate Tumbling. Prerequisite, PEGT 112 or permission.
 - PEGT 198. Special Topics.

Varsity Sports for Men Courses

- One credit (two or three hours activity per day plus all regularly scheduled meetings and game sessions). May be repeated for credit.
- PEVM 110. Baseball.
 - PEVM 111. Basketball.
 - PEVM 112. Cross Country.
 - PEVM 113. Football.
 - PEVM 115. Swimming.
 - PEVM 116. Tennis.
 - PEVM 117. Track and Field.
 - PEVM 118. Wrestling.

Team Sports Courses

- One credit (meets twice weekly)
- PETS 110. Basketball.
 - PETS 113. Soccer.
 - PETS 114. Softball (Slow Pitch).
 - PETS 116. Volleyball.
 - PETS 117. Advanced Volleyball. Prerequisite, PETS 116 or permission.
 - PETS 119. Competitive Volleyball. Permission of instructor. Grade will be S or U.
 - PETS 198. Special Topics.

Varsity Sports for Women Courses

- One credit (two or three hours activity per day plus all regularly scheduled meetings and game sessions). May be repeated for credit.
- PEVW 110. Basketball.
 - PEVW 111. Cross Country.
 - PEVW 114. Swimming.
 - PEVW 115. Tennis.
 - PEVW 116. Track and Field.
 - PEVW 117. Volleyball.
 - PEVW 118. Soccer.
 - PEVW 119. Softball.
 - PEVW 128. Cheerleading.

HEALTH EDUCATION

Program Director: Kenneth A. Briggs
 Advisors: Dr. Andrew Jenkins, Dr. Melody Madlem, Mr. Mark Perez

General Program Information

Health Education is a field of interest, a discipline, and a profession. As a profession, Health Education is one of the most meaningful and important careers available to college students today. Our ability to be healthy as individuals, families, and as a community is dependent on health education and health educators. Central's Health Education Programs are recognized throughout the state as the premier provider of health education graduates that are needed to fill the multitude of jobs available in the profession.

Students can choose to major in the following:

1. Bachelor of Science in Community Health with a specialization in Community Health Education.
2. Bachelor of Arts in School Health Education.

Students interested in majoring in Health Education should make an appointment with a Health Education major advisor to learn more about the major. The major advisors are:

1. School Health Education-Dr. Briggs (509-963-1972)
2. Community Health CWU main campus-Dr. Madlem (509-963-1971)

Community Health Major (2020)

Community Health Education Specialization (2026)

The Community Health Education specialization is a dynamic and diverse program that offers many employment options. Employing agencies include, but are not limited to, governmental health departments, hospitals, clinics, non-profit health agencies, voluntary health agencies,

international health programs, corporations, consulting firms, youth or school-based health programs, wellness clubs/clinics, and health-care delivery programs.

Prerequisites:

HED 230 must be taken prior to HED 422. HED 230 and HED 410 must be taken prior to HED 475, and HED 230 and HED 422 (pre/corequisite) should be taken prior to HED 460.

Required Courses	Credits
HED 209, Consumer Health.....	3
HED 210, Drugs and Health.....	3
HED 230, Foundations of Health Education....	3
HED 323, Infectious Disease.....	3
HED 324, Noninfectious Disease.....	4
HED 330, Health Assessment.....	4
HED 340, Technological Applications in Health Education.....	3
HED 370, Current Trends in Health Education.....	3
HED 387, Principles of Fitness and Stress Management.....	3
HED 410, Community Health.....	3
HED 422, Methods for Health Promotion.....	4
HED 440, Social Marketing of Health Education Programs.....	3
HED 445, Health Education Professionalism ..	1
HED 460, Controversial Issues in Health Education.....	3
HED 471, Program Planning I.....	5
HED 472, Program Planning II.....	5
HED 475, Community Health Administration.....	3
HED 490, Cooperative Education Field Experience.....	10
COM 345, Business and Professional Speaking.....	4
FCSN 245, Basic Nutrition.....	5
FCSF 231, Human Sexuality.....	4
Department approved electives.....	9

Total 88

Community Health Education Minor (2025)

Required Courses	Credits
HED 230, Foundations of Health Education....	3
HED 323, Infectious Disease.....	3
HED 324, Noninfectious Disease.....	4
HED 410, Community Health.....	3
HED 422, Methods for Health Promotion.....	4
HED 460, Controversial Issues in Health Education.....	3
HED 471, Program Planning I.....	5
HED 472, Program Planning II.....	5

Total 30

Bachelor of Arts

School Health Education Major (7025)

Health/Fitness Endorsement

This major satisfies the endorsement for Health/Fitness.

"You can't educate a child who isn't healthy and you can't keep a child healthy who isn't educated."
Anonymous

The School Health Education major is a lively and dynamic major that will prepare you to teach health in the secondary schools. Additionally, with the inclusion of required physical education courses, students will acquire a state certified endorsement in Health/Fitness that will also prepare you to teach K-12 physical education in the schools.

"No one should teach who is not a little bit awed by the importance of the profession." Anonymous

Application Requirements and Procedure

Students wanting to major in School Health Education need to meet with Dr. Briggs in the Physical Education building, room 108

As a School Health Education major you also need to make application for admission to the Teacher Education Program during your sophomore or junior year. Application packets are located in Black Hall 228. Remember you must have a minimum 2.8 grade point average over your last 45 credits for conditional acceptance. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

As teacher education majors, no grade less than a C is allowed for any course in your major (endorsement area) or in your teacher education program. Also, in order to student teach you must have a 3.0 GPA for the last 45 graded credits or overall accumulative.

Prerequisites

Students should keep in mind that HED 230 is the introductory professional preparation course and must be taken prior to HED 345. HED 345 needs to be completed prior to HED 422. HED 422 must be taken one or two quarters prior to student teaching. HED 445 must be taken the quarter before student teaching.

Required Courses	Credits
HED 101, Health Essentials	4
HED 210, Drugs and Health.....	3
HED 230, Foundations of Health Education....	3
HED 323, Infectious Disease.....	3
HED 324, Noninfectious Disease.....	4
HED 345, School Health Curriculum and Materials.....	3
HED 387, Principles of Fitness and Stress Management	3

HED 422, Methods for Health Promotion.....	4
HED 445, Health Education Professionalism ..	1
HED 460, Controversial Issues in Health Education.....	3
FCSN 245, Basic Nutrition	5
FCSF 231, Human Sexuality	4
EMS 245, First Aid	3
PE 280, Professional Foundations in PE	3
PE 341A, Pedagogical Foundations in PE I.....	3
PE 341B, Pedagogical Foundations in PE II	3
PE 342A, Movement Analysis I	4
PE 342B, Movement Analysis II.....	4
PE 342D, Movement Analysis IV.....	4
PE 340B, Practicum II	2
EXSC 351, Scientific Foundations in Health and Fitness.....	5

Total 71

Health/Fitness: Teaching Minor (3900)

This minor replaced the former Physical Education teaching minor and satisfies the Endorsement for Health/Fitness.

The Health/Fitness Endorsement certifies teacher education majors to teach health and/or physical education (health/fitness) in the state of Washington.

Required Courses	Credits
PE 340B, Practicum II	2
PE 341A, Pedagogical Foundations in Physical Education I	3
PE 341B, Pedagogical Foundations in Physical Education II	3
PE 342A, Movement Analysis I	4
PE 342B, Movement Analysis II.....	4
EXSC 250, Anatomical Kinesiology.....	5
HED 101, Health Essentials	4
HED 210, Drugs and Health.....	3
HED 230, Foundations of Health Education....	3
HED 345, School Health Curriculum Materials	3
HED 324, Noninfectious Disease	4
HED 422, Methods for Health Promotion.....	4

Total 42

Health Education Courses

HED 101. Health Essentials (4). Fundamental patterns and understanding of human interaction with natural and man made environments intended to help students make informed judgements.

HED 205. Drugs and Sport (2). Survey of the potential hazards of recreational, ergogenic and restorative drugs commonly used by athletes.

HED 209. Consumer Health (3). Analysis of health aids, cosmetics, non-prescription drugs, health fads and fallacies. Critical evaluation of advertising and promotional schemes; quackery.

HED 210. Drugs and Health (3). Uses and abuses of drugs. Special emphasis will be on

psycho-physiological effects upon human health and responsible drug use.

HED 230. Foundations of Health Education (3). Fundamental theories, paradigms, constructs, history, and experiences necessary for comprehensive understanding of Health Education as a profession and lifestyle.

HED 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

HED 298. Special Topics (1-6).

HED 299. Seminar (1-5). May be repeated.

HED 305. Alcohol and Alcoholism (3). An examination of our nation's number one drug problem. Multifaceted aspects of causes, treatments, prevention and alternatives are discussed.

HED 315. Positive Health Decisions (3). Develops attitudes of self-help, provides tools which students can use to analyze their own life situations, and their relationships with friends, peers, family members, public health personnel, and others.

HED 321. Health aspects of HIV/AIDS (3).

HED 323. Infectious Disease (3). Prerequisites, EXSC 351, BIOL 201, or permission of instructor.

HED 324. Noninfectious Disease (4). Prerequisites, EXSC 351, BIOL 201, or permission of instructor. Course consists of three hours of course work and two hours of medical terminology lab.

HED 325. Chemical Dependency Treatment and Recovery (3). Prerequisite, admission to the Chemical Dependency specialization or permission of the instructor. Examines chemical dependency and practice in treatment and recovery processes.

HED 330. Health Assessment (4). Prerequisite, HED 230 or permission of instructor. Theory and practice of evaluating the health or condition of individuals and groups.

HED 336. Dependency Behavior and Drug Education (4). Prerequisite, HED 230 or permission of instructor. Individual and social problems of habituation and addiction. Current information and techniques for drug education in the school and community setting.

HED 340. Technological Applications in Health Education (3). Assist students in utilizing computerized sources of information, methods of instruction, understand technology applied to training, and better use computers for resources for health information.

HED 345. School Health Curriculum/Materials (3). Prerequisites, HED 210 and 230. Examination of existing curricula and teaching materials. Design and development of school health curricula.

HED 349. Wellness Training for Peer Educators (3).

HED 350. Substance Abuse (3). Prerequisite, admission to the Chemical Dependency Specialization or permission of instructor.

HED 360. Legal and Ethical Issues in Chemical Dependency (3). Prerequisite, admission to the Chemical Dependency specialization. A review of legal and ethical issues related to professional practice.

HED 370. Current Trends in Health and Health Education (3). Contemporary health education topics and issues are explored through classroom and community contacts, visual, web-based, and interactive media. May be repeated for up to 6 credits.

HED 380. Epidemiology (3). Prerequisites, HED 323 and 324, or permission of instructor.

HED 387. Principles of Fitness and Stress Management (3). Prerequisite, HED 230 or permission of instructor. The theory and practice of health enhancement through fitness and stress management.

HED 398. Special Topics (1-6).

HED 410. Community Health (3). An overview of contemporary community health programs; problems in community health at the local, national, and international levels.

HED 412. Health Aspects of Aging (3). Prerequisite, HED 101 or permission of instructor. Examination of total health as it relates to the aged and the aging process.

HED 422. Methods for Health Promotion (4). Prerequisites HED 101 and HED 230, or permission of instructor.

HED 436. Chemical Dependency and the Schools (4). Prerequisite, admission to the Chemical Dependency Specialization or permission of the instructor. The course will familiarize the student with programs that provide assistance to chemically dependent students within the school and/or the community.

HED 440. Social Marketing of Health Education Programs (3). Social marketing theory and practice, health communication strategies, and basic qualitative research methods applied to social marketing theory.

HED 442. Field Work and Experience in Health Education (1-15). Prerequisite, permission of the instructor. Observation and participation in health programs, and/or HED 101. May be repeated to a maximum of 15 credits.

HED 445. Health Education Professionalism (1). Prerequisite, to be taken the quarter before student teaching or placement in community health internship. Professional ethics, job readiness, and job search in health education.

HED 446. Health Education Curriculum for Elementary Teachers (3). Examination of available curricula and teaching materials in health education for elementary school

teachers. Students must develop an elementary health education curriculum.

Enrollment is subject to being fully admitted to the Teacher Education Program.

HED 460. Controversial Issues in Health Education (3). Prerequisite, HED 230, Co-prerequisite, HED 422. Current and controversial issues confronting school and community health education.

HED 471. Program Planning I (5). Prerequisite, HED 230. Health program planning; needs assessment and goal setting. Formerly HED 371. Students may not receive credit for both.

HED 472. Program Planning II (5). Prerequisite, HED 471. Health program planning; implementation and evaluation. Formerly HED 372. Students may not receive credit for both.

HED 475. Community Health Administration (3). Prerequisites, HED 230 and HED 410. Understanding and application of knowledge to various administrative tasks in community health. Grants, management, and personnel issues will be covered.

HED 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

HED 491. Workshop (1-6). Topics in health education, including work sessions, lectures and demonstrations.

HED 492. Practicum (4). Prerequisite, HED 345 or 472 or permission of instructor. Practical experience and application of responsibilities and competencies necessary for practicing health education.

HED 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

HED 498. Special Topics (1-6).

HED 499. Seminar (1-5). May be repeated.

RECREATION AND TOURISM

Bachelor of Science

Recreation and Tourism (6760)

Program Director: Dr. William Vance

Advisors:

Dr. Barbara Masberg

Dr. Dorothy Chase

Program General Information

The Recreation and Tourism Program prepares students for professional positions in a wide variety of government, private, commercial, not-for-profit and other parks, recreation, tourism organizations. Students choose one of two major areas of specializations: **Tourism**

Management or Recreation Management. Each specialization has both a major program and a minor program. Detailed descriptions of each major specialization are provided below.

Tourism Management Specialization (6764)

The student with a specialization in Tourism Management may choose a career in a wide variety of travel and tourism related industries including directing operations in hotels, resorts, convention centers, cruises, airlines, visitor centers, casinos, tour companies, meeting and destination planning businesses, and cultural and heritage facilities. The career options within each industry are extremely varied and include: management, special event planning, sales and marketing, catering or food and beverage coordination, casino, games supervision, and control.

Contact advisors for information related to articulation with community colleges and high school tourism related programs.

Admission Requirements: Tourism Management Specialization

Students wishing to apply for admission must have a minimum GPA of 2.5 in all courses OR a minimum cumulative GPA of 3.0 in the first 12 credits of RT coursework. Interested students must complete and submit a major application which may be obtained by contacting an advisor.

Required Courses	Credits
RT 271, Introduction to Tourism Industry	3
RT 275, Career Development	2
RT 292*, Practicum	6
RT 325, Promotion in Tourism and Recreation	4
RT 330, Outdoor Recreation	3
RT 350, Recreation and Tourism Special Groups	2
RT 419, Applied Research	5
RT 471, Planning and Development of Tourism	3
RT 473, Airline Operations	3
RT 474, Hotel Operations Analysis	3
RT 475, Professionalism in Tourism	2
RT 480, Recreation and Tourism Administration	4
RT 484, Legal Liability and Risk Management	3
RT 490*, Cooperative Education	10
IT Applications courses approved by Advisor	3-4
RT 222, Games and Adventure Activities OR PE Activity courses approved by advisor	4
ACCT 301, Financial Accounting Analysis	5
Advisor approved electives**	20

Total 88-89

*As a part of the course of study, students are required to complete a practicum in which they are employed in a tourism operation. Also

required is a cooperative education/internship experience in which the student has directed and supervised study under the guidance of a tourism mentor; actually working and learning in a professional setting.

**Electives must be approved by the student's advisor prior to registration for coursework.

Recreation Management Specialization (6762)

The Recreation Management specialization prepares students for entry level supervisory/managerial positions with government parks and recreation departments, Y.M.C.A.'s and Boys and Girls Clubs, armed forces recreation, university recreation and intramural sports, fitness and racquet clubs, camping and outdoor recreation, and employee recreation services.

Admission Requirements: Recreation Management Specialization

Admission to the Recreation Management specialization requires a minimum cumulative grade point average of 2.0 in at least 45 hours of undergraduate study OR a minimum grade point average of at least 2.5 in the first twelve credits of RT coursework exclusive of those obtained through RT 292 and RT 490 or their equivalents.

Required Courses	Credits
RT 201, Introduction to Recreation Management	3
RT 221, Community Recreation Leadership	2
RT 292, Practicum	6
RT 325, Promotions in Tourism and Recreation	4
RT 330, Outdoor Recreation	3
RT 350, Recreation and Tourism for Special Groups	2
RT 483, Budget and Finance in Recreation Management	2
RT 484, Legal Liability and Risk Management	3
RT 488, Program Management	4
RT 490, Cooperative Education	12
MGT 380, Organizational Management	5
HRM 381, Management of Human Resources	5
EMS 245, First Aid	3
Select from the following:	4-5
PSY 205, Psychology of Adjustment (5), OR A population specific psychology/ sociology course with approval of the academic advisor.*	
Advisor approved electives	24

Total 82-83

Community Recreation Minor (2050)

Required Courses	Credits
RT 201, Introduction to Recreation Management	3
RT 221, Community Recreation Leadership	2
RT 292, Practicum	4
RT 488, Program Management	4
Advisor approved electives	7
Total	20

Tourism Management Minor (8480)

Required Courses	Credits
RT 271, Introduction to Tourism	3
RT 272, Front Office	3
RT 475, Professional Development	2
RT 480, Recreation and Tourism Administration	4
RT 484, Legal Liability and Risk Management	3
RT 490, Cooperative Education OR RT 292, Practicum (Based upon advisement)	4
**Advisor approved electives	10
Total	29

- A) The 24-credit elective area will include at least 10 credits of academic courses carrying the RT prefix (not to include RT 292, Practicum or RT 490, Cooperative Education credits).
- B) Both internal (RT) courses and interdisciplinary (non-RT) courses that are not a part of the Recreation Management core, and that are to be applied to the degree program must be approved by the student's academic advisor.
- C) A maximum of four RT 292 practicum credits beyond those taken to satisfy the Recreation Management core requirement may be applied to the 24 credit elective area with permission of the student's academic advisor. A maximum of eight RT 490, Cooperative Education credits beyond those taken to satisfy the Recreation Management core requirement may be applied to the 24-credit elective area with permission of the student's academic advisor.

Minor in Wine Trade and Tourism (8480)

Students must be 21 years of age or older and must apply for acceptance. Additional course fees and continuing education tuition applies.

Required Courses	Credits
RT 402, Wine Basics	5
RT 403, The Global World of Wine	5
RT 404, The Wine Trade	5
ME 330, Principles of Retailing	4
ME 486, Retailing and E-commerce	4
RT 490, Cooperative Education	6
Choose three of the following courses with advisement	9-13
RT 271, Introduction to Tourism (3)	

RT 405/505, Hospitality Catering (3) (online course)	
RT 373D, Convention Management (5)	
RT 373E, Resort Management (5)	
RT 471, Tourism Planning and Development (3)	
RT 480, Recreation and Tourism Administration (4)	
Total	38-42

Wine Trade Professional Certificate Program - Type B

Advisor: Amy Muma, Department of Continuing Education

Students must be 21 years of age or older and must apply for acceptance. Additional course fees and continuing education tuition applies.

Required Courses	Credits
RT 402, Wine Basics	5
RT 403, The Global World of Wine	5
RT 404, The Wine Trade	5
Total	15

Note: Additional course fees apply. Students will be expected to spend significant amounts of time outside the classroom working on projects and assignments.

Recreation and Tourism Courses

RT 201. Introduction to Recreation Management (3). History, basic philosophy and modern developments for professional application. Emphasis on careers in various recreation and leisure services agencies. Formerly LES 201.

RT 221. Community Recreation Leadership (2). Prerequisite, RT 201 or permission of instructor. Basic leadership theories, styles, approaches. Practical leadership exercises to improve skills and abilities. One hour lecture, 2 hours lab, weekly. Formerly LES 221.

RT 222. Games and Adventure Activities (4). Prerequisite, Recreation Tourism major or minor. Games and activities appropriate for playgrounds, camps & community centers. Socialization, education, trust building, outdoor adventure and other activities. Field trips required. One hour lecture, 2 hours lab per week. Formerly LES 485 and RT 485. Students may not receive credit for more than one.

RT 271. Introduction to Tourism (3). Presents an overview of travel, tourism and commercial recreation with special emphasis on the various segments of the tourism supply sector. Formerly LES 271.

RT 272. Front Office (3). Examines the rooms division and front office functions critical to hotel operations. Includes the guest cycle, personnel supervision, sales techniques in

- the reservation process, and hotel organization and operation. Formerly RT 373F. Student may not receive credit for both.
- RT 275. Career Development (2).** Prerequisite, RT 271. Students will explore career options and networks within the tourism industry and develop materials for a job search.
- RT 292. Practicum (1-3).** Prerequisite, permission of advisor. Thirty-five (35) "on-the-job" hours of practical experience per one (1) credit hour earned. Three (3) credits and permission of advisor required for Tourism Management specialization. Six (6) credits, permission of advisor required for Recreation Management specialization. Four (4) additional hours may be applied toward the RT "elective" area. No more than three credits may be earned in the same agency/program. May be repeated for credit. Formerly LES 292.
- RT 296. Individual Study (1-6)** . May be repeated. Formerly LES 296.
- RT 298. Special Topics (1-6).** Formerly LES 298.
- RT 299. Seminar (1-5).** Formerly LES 299.
- RT 302. Leisure and Freedom (3).** History, philosophy, and development of leisure, recreation and play. Development of leisure life-styles and patterns. Review of leisure role and influence in life and living. Individualized profile and planning for the future. Formerly LES 302.
- RT 309. Planning and Development of Park and Recreation Areas (1-2).** Prerequisite, RT 201. Objectives, procedures, and techniques for the planning, development and construction of park and recreation facilities. Two field trips required. May be repeated under different categories. Formerly LES 309.
- A: Parks, playgrounds and open spaces
B: Athletic and fitness facilities
C: Recreation centers/stadiums/auditoriums
D: Camps and outdoor recreation sites
- RT 325. Promotions in Tourism and Recreation (4).** Prerequisite, RT 201, RT 271 or permission. Practical projects in written, verbal, and visual communications vital to information needs for recreation and tourism. Planning and organizing a promotions program. Formerly LES 325.
- RT 330. Outdoor Recreation (3).** Prerequisite, admission into a Recreation and Tourism major or minor. Historical antecedents and current issues and practices in the use and management of parks, forests, wilderness areas and other North American outdoor recreation resources. Formerly LES 330.
- RT 337. Tour and Interpretive Program Development (3).** Methods, techniques and skills used in the planning, development and presentation of resource based interpretive programs and visitor tours. This course will include theoretical understanding of the interpretive process and practice of new skills. Formerly LES 337.
- RT 350. Tourism and Recreation for Special Groups (2).** Prerequisite, RT 201, RT 271 or permission. Distinguishing needs of special populations; mentally ill, disabled, aged, and others. Attention to the ADA. Observations of selected population groups. Formerly LES 350.
- RT 371. Tourism Essentials (5).** Prerequisite, RT 271 or permission of instructor. Travel and tourism, including history, spatial aspects, economics, planning, marketing, research and trends for domestic and international tourism. Formerly LES 371.
- RT 373. Hospitality Management (5).** Presentation of management topics applied to the hospitality industry. May be repeated for credit under different Letters/Titles. Formerly LES 373.
- B. Strategic Marketing in Hospitality
C. Hospitality Sales and Advertising
D. Convention Management
E. Resort Management
- RT 377. Introduction to Casino Management (3).** An overview of the casino industry including: traditional casinos, riverboats; limited stakes casinos; historical perspective; legal, social, cultural and economic impacts; Indian gaming; regulation and control of gaming; and future trends in gaming industry. Formerly LES 377.
- RT 379. Introduction to Cruise Line Management (3).** An overview of the cruise industry including: cruise lines, ships, history of cruising, human resource practices, marketing, design, terminology and future trends. Formerly LES 379.
- RT 380. Supervision in the Hospitality Industry (3).** Prerequisite, RT 271 or permission. Basics of supervising programs, personnel, and facilities with emphasis on practical supervisory skill development. Formerly RT 373A. Student may not receive credit for both.
- RT 381. Recreational Sports Management (3).** Organization and implementation of recreational sports programs in community recreation settings. Emphasis on facilities, personnel, materials and supplies, tournament bracketing and other practical considerations. Formerly LES 381.
- RT 393. Leisure Service Agency Visitations (1-3).** Off campus field visits, usually from two to three days in duration. Review of facilities, programs and clientele. Lecture and discussion by and with agency leader/supervisor/manager personnel pertaining to agency operations. Grade will be S or U. May be repeated for credit under different titles. Formerly LES 393.
- A. Public Recreation Agencies
B. Voluntary/Youth Serving Agencies
C. Military Recreation Agencies
D. Commercial Recreation Agencies
E. Employee/Industrial Recreation Agencies
F. Tourism Related Agencies
G. Therapeutic/Rehabilitation Related Agencies
H. Senior Centers/Nursing Homes
I. Outdoor Recreation/Education Agencies
J. Resident Camps
K. Parks and Playgrounds
L. Sports and Aquatics
M. Community Centers
N. Destinations
O. Attractions
P. Hospitality
Q. Transportation
- RT 398. Special Topics (1-5).** Formerly LES 398.
- RT 402. Wine Basics (5).** Prerequisite, Students must be 21 years of age or older. Fundamentals of viticulture and winemaking. Main wine styles, pairing wine with food, issues of wine and health. Professional techniques for evaluation and assessment of wine. Additional course fees apply.
- RT 403. The Global World of Wine (5).** Prerequisite, students must be 21 years of age or older. Grape varieties, climate, soil, vineyard, vinification techniques, wines, legalities, regulations and trade structures around the world. Import, export, emerging regions in production and consumption. Additional course fees apply.
- RT 404. The Wine Trade (5).** Prerequisite, students must be 21 years of age or older. Overview of wine industry trade issues. Production, sales, pricing, merchandising, quality control, wine brands, advertising, journalism and the wine industry in the restaurant and hospitality sectors. Additional course fees apply.
- RT 405. Hospitality Catering (3).** Basics of off premise catering including menu planning, budgeting, logistics and marketing. FCSN 405, RT 405, and RT 505 are equivalent courses. Students may not receive credit for more than one.
- RT 419. Applied Research for Recreation and Tourism (5).** Prerequisite, senior class standing or permission of instructor. Develops critical thinking and research methods applied to current problems existing in recreation and tourism agencies/businesses. Problem identification, conceptualization, operationalization, literature review; research skills, research methods, and report writing. Formerly LES 419. In effect Fall 2002
- RT 420. Research Analysis (4).** Prerequisite, RT 419. Student research and presentation of an array of contemporary problems, issues and trends in the leisure services profession. Formerly LES 420.

RT 431. Resident Camp Programming (3). Prerequisite, permission of instructor. Methods, techniques and skills used in the organization and operation of a resident camp program. Formerly LES 431.

RT 437. Interpretive Writing and Design (3). Prerequisite, RT 337. Advanced application of interpretive techniques to the design and development of interpretive publications, visitor center exhibits, and wayside exhibits and signs. Instruction will include an experiential field trip. Formerly LES 437.

RT 471. Planning and Development of Tourism (3). Prerequisite, RT 271. Economic, social, fiscal, environmental and political impacts of tourism; identifying and accessing tourism markets and destinations; the tourism planning and development process. Formerly LES 471.

RT 472. Issues in Gaming Management (3). Prerequisite, RT 377 or permission of instructor. Examines current social, economic, legal, geographic, technology, and marketing issues and trends in the gaming industry with emphasis on Indian gaming and responsible gaming issues. Students must be 21 years of age due to the age requirement for students to enter a casino during the course field trip. Formerly LES 472.

RT 473. Airline Operations (3). Prerequisite, RT 271. Examines the airline industry, its components and methods of operation. Also the interaction with other segments of the industry. Procedures for working with the airlines.

RT 474. Hotel Operations Analysis (2). Prerequisites, Math Basic and Breadth requirements, ACCT 301, RT 272 and permission. Analysis of hotel performance and forecasting, with tools typically used in a lodging environment. RT 474 and RT 574 are equivalent courses. Students may not receive credit for both.

RT 475. Professionalism in Tourism (2). Prerequisite, RT 292. Students will develop skills related to professionalism in the tourism industry along with assessing themselves in order to successfully enter their careers.

RT 479. Cruise Line Workshop (2). Students will learn the ports, ports of call, and cruise lines of the Pacific Northwest. A visitation will be made to selected cruise offices and ports.

RT 480. Recreation and Tourism Administration (4). Prerequisite, RT 271 and senior standing. Contemporary problems and issues; basic applied research; organizational development; policy formulation; human resources, inventory and program/personnel evaluation processes. Formerly LES 480.

RT 483. Budget and Finance (2). Budget types commonly used in leisure services agencies.

Budget preparation skills, funding sources, budget presentation and defense, execution of allocated financial resources. Formerly LES 483.

RT 484. Legal Liability and Risk Management (3) Aspects of personnel law and premises liability in public, private and "not for profit" education, human and social services organizations. Procedures for managing risks. Open to recreation and tourism and physical education majors, and HHPR graduate students only. RT 484 and PE 484, are equivalent courses. Formerly PE 460/LES 484. Students may not receive credit for more than one.

RT 487. Outdoor Recreation Issues (3). Prerequisite, RT 330. This course addresses recent and breaking issues in the outdoor recreation field. The course involves readings and discussions in both the classroom and field environments. Formerly LES 487.

RT 488. Program Management (4). Prerequisite, RT 221 or permission. Recreation programming theory and practice. Exercises in organizing, implementing and supervising community recreation activities and services. Formerly LES 321 and RT 321. Students may not receive credit for more than one.

RT 490. Cooperative Education (1-12). Prerequisite, permission of instructor. An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly LES 490.

RT 491. Workshop (1-6). Formerly LES 491.

RT 496. Individual Study (1-6). May be repeated. Formerly LES 496.

RT 498. Special Topics (1-6). Formerly LES 498.

RT 499. Seminar (1-5). Formerly LES 499.

Undergraduate Courses/Programs on Reserve

The following programs and courses are on reserve and may be offered subject to program needs: Community Health, Chemical Dependency Specialization, PEAQ 221, Life Saving (5), PE 362. Dance in Education (4), PE 471. Philosophy of Elementary School Physical Education (3), PEAQ 118, Canoeing (1), PEGT 110, Beginning Gymnastics (1), PEID 117. Advanced Golf (1), PEID 121. Intermediate Fencing (1), PEID 122. Advanced Fencing (1), PEID 131. Snowshoeing (1), or PEID 133. Backpacking (1), PETS 115, Touch Football (1), PETS 118 Rugby (1).

HISTORY

Faculty

Chair: Karen J. Blair
Language and Literature 100

Professors

Karen J Blair, 20th Century U.S., Women's History

Associate Professor

Roxanne Easley, Russia, Eastern Europe
Thomas Wellock, Contemporary U.S., Environmental, American West

Assistant Professors

James Cook, East Asia
Michael Ervin, Latin American History
Daniel Herman, U.S. Pre 1877
Merle Kunz, History Education

Emeritus Professor

Kent Richards, American West, Pacific Northwest

General Departmental Information

The faculty of History offers courses leading to the degrees of Bachelor of Arts and Master of Arts. Majors who desire to graduate with honors should consult the history honors director on the special requirements.

Students who declare a major in History must register with the Department.

History Honors Program

Qualified students are urged to enter the History Department's honors program. To qualify for the program, students must complete 25 credits in their major and have an overall GPA of 3.0 and 3.25 in history. Honors students will complete the following requirements:

1. an elective course in addition to those required for their major in an area of concentration (United States, Europe, or Non-Western)

2. a year of coursework in one departmentally-approved foreign language at an accredited college or university. If it is the same language as that taken in high school, the student must complete the course work at the 200 level.

3. an honors research paper (25 page minimum) completed during HIST 481. A faculty committee will judge whether the paper meets departmental standards for honors.

Students who complete the above requirements will graduate with departmental honors. Please contact the Department Chair for more information.

Bachelor of Arts

History Major (4000)

It is recommended that students who plan to enter graduate school should complete two years of a foreign language at the college level.

Required Courses	Credits
Select from the following:	20
HIST 101, 102, 103, World Civilization*	
HIST 143, 144, United States History	
HIST 302, Introduction to History	3
HIST 481, Understanding History	3
Upper Division United States History.....	5
Upper Division European History.....	5
Upper Division African, Asian, Middle Eastern or Latin American History	10
Upper division History electives.....	12-14

Total 58-60**

*Western Civilization may be substituted.

**Students with fewer than 60 credits must have a minor in order to graduate.

History: Teaching Broad Area Major (4011)

This major satisfies the endorsements for History and Social Studies.

This major is designed for students in the secondary teacher training program. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
*HIST 101, 102, 103, World Civilization	15
HIST 143, 144, United States History.....	10
HIST 301, Pacific Northwest History.....	3
HIST 302, Introduction to History	3
HIST 421, Methods and Materials in the Social Studies, Secondary OR **EDEL 420, Methods and Materials in the Social Sciences, Elementary	3
HIST 481, Understanding History	3
Select from the following:	15
Upper Division U.S. History (5)	
Upper Division European History (5)	
Upper Division African, Asian, Middle Eastern or Latin American History (5)	
POSC 210, American Politics.....	5
Select from the following:	5
ECON 101, Economic Issues (5)	
ECON 102, World Economic Issues (5)	
ECON 201, Principles of Economics Micro (5)	
ECON 202, Principles of Economics Macro (5)	
Select from the following:	5
ANTH 107, General Anthropology (5)	
SOC 101, Social Problems (5)	
SOC 107, Principles of Sociology (5)	
Select from the following:	5

GEOG 101, World Regional Geography (5)	
GEOG 107, Physical Geography (5)	
GEOG 304, Economic Geography (5)	
GEOG 308, Cultural Geography (5)	
Select from the following:.....	3-5
GEOG 352, Geography of North America (5)	
GEOG 355, Geography of the Pacific Northwest (4)	
GEOG 371, Geography of Europe (5)	
GEOG 415, Geography of Oceania (3)	
GEOG 470, Geography of South America (4)	
GEOG 471, Geography of Middle America (3)	
GEOG 474, Geography of China (4)	
GEOG 475, Geography of Asia (5)	

Total 75-77

*Western Civilization may be substituted.

**Prior completion of EDCS 311 recommended. Students must be admitted to the Teacher Education program prior to enrolling in this course.

History Minor (4000)

Required courses	Credits
Select from the following:	10
HIST 101, 102, 103, World Civilization*	
HIST 143, 144, United States History	
Upper division History electives	20

Total 30

*Western Civilization may be substituted

History: Teaching Minor (4015)

This minor satisfies the endorsement for History.

This teaching minor must be combined with another teaching major. This minor meets the requirements for endorsement for certification.

Required courses	Credits
HIST 143 or 144, United States History	5
HIST 301, Pacific Northwest History.....	3
HIST 302, Introduction to History	3
HIST 421, Methods and Materials in the Social Studies, Secondary	3
Upper-division European History	3-5
Upper-division Asian, Latin American, African, or Middle Eastern History	3-5
POSC 210, American Politics.....	5
Select from the following:	5
ECON 101, Economic Issues (5)	
ECON 102, World Economic Issues (5)	
ECON 201, Principles of Economics Micro (5)	
ECON 202, Principles of Economics Macro (5)	
Select from the following Upper-division regional geography:	3-5
GEOG 352, Geography of North America (5)	

GEOG 355, Geography of the Pacific Northwest (4)	
GEOG 371, Geography of Europe (5)	
GEOG 415, Geography of Oceania (3)	
GEOG 450, Geography of Arid Lands (4)	
GEOG 470, Geography of South America (4)	
GEOG 471, Geography of Middle America (3)	
GEOG 474, Geography of China (4)	
GEOG 475, Geography of Asia (5)	

Total 33-39

History Courses

HIST 101. World Civilization to 1500 (5). Origins and development of the major world civilizations to the 15th century. A comparative study of their political, social, and economic institutions, and their religious and intellectual backgrounds.

HIST 102. World Civilization: 1500-1815 (5). A comparative survey of political, social, economic and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101.

HIST 103. World Civilization Since 1815 (5). A comparative survey of political, social, economic, and cultural developments. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101.

HIST 143. United States History to 1865 (5). The Colonial, Revolutionary and National periods.

HIST 144. United States History Since 1865 (5). Reconstruction, Industrial America and 20th century urban America. For general education (breadth) credit, it is preferred that a student be enrolled in or have completed ENG 101.

HIST 298. Special Topics (1-6).

HIST 301. Pacific Northwest History (3). Exploration and settlement; subsequent political, economic, and social history with particular emphasis on Washington.

HIST 302. Introduction to History (3). Exercises in historical research, critical analysis and interpretation. Sophomore and junior history majors only.

HIST 312. Ancient Near East and Greece (5). Mesopotamian, Egyptian, Hellenic and Hellenistic civilizations from their earliest beginnings to the breakup of the Alexandrian Empire.

HIST 313. History of Rome 500 B.C. to 500 A.D. (5). Beginning, city-state, republican period; world empire; decline.

HIST 314. Military History of the United States (5). A comprehensive and systematic survey and analysis of the American military experience from Colonial times through the Vietnam war. HIST 314 and MSL 314 are equivalent courses. Students may not receive credit for both. Formerly HIST/MSL 314.1.

- HIST 315. Muslim Middle East (3-5).** The origins and spread of Islamic civilization and its interaction with Graeco-Roman, Persian, and Indian civilizations. Crusades and the rise and fall of the Ottoman Empire.
- HIST 316. Modern Middle East 1914 to the Present (3-5).** The Arab revolt, the British-French mandates, nationalism, modernization, independence movements, Arab-Israeli struggle, Palestinians and oil politics.
- HIST 322. World Prehistory (4).** Old and New World prehistory from late Pliocene to the early historic period, including the ecology and development of hunting-gathering, agriculture and state-level societies. HIST 322 and ANTH 322 are equivalent courses. Students may not receive credit for both.
- HIST 328. Modern Latin America (5).** Analyzes the history of Latin America in the past two centuries, from the Wars of Independence until the present day. HIST 328 and HIST 528 are equivalent courses. Students may not receive credit for both.
- HIST 329. The Tropics and the Modern World (5).** Analyzes the history of the modern world through the history of tropical commodities. HIST 329 and HIST 529 are equivalent courses. Students may not receive credit for both.
- HIST 330. Africa to 1800 (5).** This course is designed to explore Africa's earliest civilizations; internal processes of change; external influences; state formation; complex societies; connections to the world economy.
- HIST 331. Colonial Africa (3-5).** Africa on the eve of colonial conquest; causes of imperialism; colonial rule and African reactions and initiatives; independence and colonial legacy.
- HIST 338. Conquests and Compromises: American Indian History since 1492 (5).** Discussion and lecture course on interactions between American Indians and Europeans since the arrival of Columbus. HIST 338 and History 538 are equivalent courses. Students may not receive credit for both.
- HIST 339. Colonial British America (5).** Social, cultural, political, and economic life in the British Colonies of North America to 1763.
- HIST 340. The American Revolution (5).** Causes and consequences of the American Revolution, 1688-1789. HIST 340, HIST 440 and HIST 540 are equivalent courses. Students may receive credit for only one of these courses.
- HIST 341. The United States: Early National Period 1789-1844 (3-5).**
- HIST 342. History of Black America to 1865 (5).** A survey of the role of the African-American in American society from colonial times to 1865.
- HIST 343. History of Black America since 1865 (3-5).** A survey of the role of the African-American in American society from 1865 to present.
- HIST 345. History of Social Services in the United States (3-5).** Attitudes, policies and practices with regard to those people who require charitable assistance, public or private, from colonial times to the present.
- HIST 346. Women in American History (5).** A survey of the role of women, their treatment and response, in American society from colonial times to the present. HIST 346, HIST 446 and HIST 546 are equivalent courses. Students may receive credit for only one of these courses.
- HIST 347. On the Border: Excursions in Southwestern History (5).** Discussion and lecture course on ethnic collisions, environmental revolutions, and urban developments in the American Southwest since the time of the Ancestral Puebloans.
- HIST 348. Economic History of the United States (5).** Economic factors in the development of the American nation from the European background to the present. HIST 348 and ECON 348 are equivalent courses. Students may not receive credit for both.
- HIST 352. The History of the American Family (3).** American family patterns from early settlement to the present; demography, gender roles, courtship, marriage, child-raising, aging, ethnicity and alternative life styles.
- HIST 354. American Environmental History (5).** Environmental values and practices of the diverse populations of America. HIST 354, HIST 454 and HIST 554 are equivalent courses. Students will be given credit for only one of three courses.
- HIST 370. Medieval European History (5).** Survey of Western European history from late antiquity to the sixteenth century; political, economic, social and religious thought and institutions. HIST 370 and HIST 570 are equivalent courses. Students will be given credit given for only one. Formerly HIST 371
- HIST 373. History of Modern East Europe (5).** Poland, Czech and Slovak Republics, Austria, Hungary, Romania, Yugoslavia, Bulgaria, Greece, Albania, with special attention to multi-ethnicity, economic underdevelopment and modernization, political dependence and nationalism.
- HIST 376. History of Modern East Europe (5).** Poland, Czech, Slovak Republics, Austria, Hungary, Romania, Yugoslavia, Bulgaria, Greece, Albania, with special attention to multi-ethnicity, economic underdevelopment and modernization, political dependence and nationalism. HIST 376 and HIST 576 are equivalent courses. Students may not receive credit for both.
- HIST 380. Modern East Asia (5).** A survey of the modern histories of China, Japan, and Korea from 1600 to the present. Imperialism, nationalism, and the rise of communism are covered. HIST 380 and HIST 580 are equivalent courses. Students may not receive credit for both. Formerly HIST 385
- HIST 381. History of Modern Southeast Asia: Colonial Era to the Present (5).** This is a survey course in the political and cultural history of modern Southeast Asia. It will examine European colonialism, nationalism, decolonization, and post WWII configuration.
- HIST 383. East Asian Civilization (5).** A general survey of the development of civilization in China, Japan, Korea, and Southeast Asia to about 1600.
- HIST 386. The Latin American Colonies (5).** Spanish and Portuguese colonial empires to completion of Latin American wars of independence (1825), focusing primarily on Peru and Brazil.
- HIST 388. Economic History of Europe Since 1760 (3-5).** The Industrial Revolution in Great Britain and on the Continent; the rise of trade unionism, socialism, anarchism, and imperialism in the 20th century. HIST 388 and ECON 388 are equivalent courses. Students may not receive credit for both.
- HIST 395. Research in Local History (1-6).** Comparative local history with emphasis on research techniques and the utilization of sources.
- HIST 398. Special Topics (1-6).**
- HIST 421. Methods and Materials in the Social Studies, Secondary (3).** Prior completion of EDCS 311 recommended. HIST 421 and HOSC 421 are equivalent courses. Students may not receive credit for both. Students must be admitted to the Teacher Education Program prior to enrolling in this course.
- HIST 425. Renaissance and Reformation (5).** HIST 435 and HIST 525 are equivalent courses. Students may not receive credit for both.
- HIST 430. Tudor-Stuart England (3-5).** HIST 430 and HIST 530 are equivalent courses. Students may not receive credit for both. Formerly HIST 430.1/530.1.
- HIST 431. Africa: The Crisis of Nation Building (5).** An in-depth multi-disciplinary approach to the present political and socio-economic issues, problems and tensions in selected areas of Africa. HIST 431 and HIST 531 are equivalent courses. Students may not receive credit for both.

- HIST 433. Selected Topics in African History** (5). Specific matter will vary but emphasis will be on the social and cultural development of African states since pre-colonial times. HIST 433 and HIST 533 are equivalent courses. Students may not receive credit for both.
- HIST 440. The American Revolution** (5). Causes and consequences of the American Revolution, 1688-1789. HIST 440, HIST 340 and HIST 540 are equivalent courses. Students may receive credit for only one course.
- HIST 443. The West in American History** (3-5). Exploration, territorial acquisition, patterns of settlement, economic development, and the influence of the frontier on American institutions. HIST 443 and HIST 543 are equivalent courses. Students may not receive credit for both.
- HIST 444. Sectionalism, Civil War and Reconstruction** (3-5). Slavery, the Old South, sectionalism, the breakdown of the Union, and secession. A military, political, social history of North and South during the Civil War, and the aftermath of the war. HIST 444 and HIST 544 are equivalent courses. Students may not receive credit for both.
- HIST 446. Women in American History** (5). A survey of the role of women, their treatment and response, in American society from colonial times to the present. HIST 446, HIST 346 and HIST 546 are equivalent courses. Students will be given credit for only one.
- HIST 449. History of Women and the West** (5). Women in the western United States, with emphasis on the nineteenth and twentieth centuries: myths and stereotypes; women's work; community roles; class and racial/ethnic differences. HIST 449 and HIST 549 are equivalent courses. Students may not receive credit for both.
- HIST 450. Exploring U.S. Cultural History** (5). Thematic approach to nineteenth-century cultural transformations in U.S. Selected topics; mesmerism, utopias, true womanhood, women's rights, slave spirituals, confidence men, gold rushes. HIST 450 and HIST 550 are equivalent courses. Students may not receive credit for both.
- HIST 451. 20th Century U.S. 1896-1919** (3-5). Imperialism, Progressivism, and World War I. HIST 451 and HIST 551 are equivalent courses. Students may not receive credit for both.
- HIST 452. 20th Century U.S. 1919-1945** (3-5). Prosperity and depression; the New Deal and its implications; World War II, origins and conclusion. HIST 452 and HIST 552 are equivalent courses. Students may not receive credit for both.
- HIST 453. 20th Century U.S. 1945 to the Present** (3-5). Cold War, sedentary 50s, rebellious 60s, the Watergate era. HIST 453 and HIST 553 are equivalent courses. Students may not receive credit for both.
- HIST 454. American Environmental History** (5). Environmental values and practices of the diverse populations of America. HIST 454, HIST 354 and HIST 554 are equivalent courses. Students will be given credit for only one of three courses.
- HIST 463. History of American Foreign Relations Since 1941** (3-5). From Pearl Harbor to the present. HIST 463 and HIST 563 are equivalent courses. Students may not receive credit for both.
- HIST 464. Latin American Revolutions** (5). This course compares and contrasts the causes, courses, and consequences of the Mexican Revolution (1910-40), the Cuban Revolution (1959-present), the Chilean Revolution (1970-73), and the Nicaraguan Revolution (1979-89). HIST 464 and HIST 564 are equivalent courses. Students may not receive credit for both.
- HIST 465. History of the People's Republic of China.** (5). Evaluates the historical record of the Chinese Communists in power since the establishment of the People's Republic of China in 1949. HIST 465 and HIST 565 are equivalent courses. Students may not receive credit for both.
- HIST 471. German History, 1815-1918** (3-5). A political, diplomatic, socio-economic, and intellectual study of Germany from the end of the Napoleonic Era through World War I. Emphasis on German unification and the socio-economic background to World War I. HIST 471 and HIST 571 are equivalent courses. Students may not receive credit for both.
- HIST 472. German History, 1918 to the Present** (3-5). A political, socio-economic, and intellectual study of Germany with special attention to the causes, progress, and aftermath of the National Socialist State. HIST 472 and HIST 572 are equivalent courses. Students may not receive credit for both.
- HIST 473. Russia to 1881** (3-5). The political, social, economic and cultural development of Russia from ancient times to the assassination of Alexander II. HIST 473 and HIST 573 are equivalent courses. Students may not receive credit for both.
- HIST 474. Russia Since 1881** (3-5). The political, economic, social and cultural history of Russia and the Soviet Union since 1881. HIST 474 and HIST 574 are equivalent courses. Students may not receive credit for both.
- HIST 479. Europe in the 20th Century** (3-5). Events and movements which led to two wars; change in governmental structure in the cycles of war and peace. HIST 479 and HIST 579 are equivalent courses. Students may not receive credit for both.
- HIST 481. Understanding History** (3-5). Analysis of the nature of history, of the way historians reason, and of the search for meaning in history. HIST 481 and HIST 581 are equivalent courses. Limited to seniors only.
- HIST 482. Revolutionary China** (3). The causes, course, and effects of the 20th century Chinese Revolution 1911-present. HIST 482 and HIST 582 are equivalent courses. Students may not receive credit for both.
- HIST 483. Modern China** (5). The history of China in the 19th and 20th centuries, including the nature of China's response to the West and the Chinese Revolution of the 20th century. Emphasis on internal social and economic change. HIST 483 and HIST 583 are equivalent courses. Students may not receive credit for both.
- HIST 484. Modern Japan** (3-5). The recent historical development of Japan beginning with the collapse of the Tokugawa Shogunate and the resumption of foreign contacts in the mid-19th century. Emphasis is given to the modernization process with its concomitant political, social, economic, and intellectual changes. HIST 484 and HIST 584 are equivalent courses. Students may not receive credit for both.
- HIST 487. The Russian Revolutionary Movement** (3-5). Origins and development of Russian radicalism through the Bolshevik Revolution of 1917. HIST 487 and HIST 587 are equivalent courses. Students may not receive credit for both.
- HIST 488. Mexico in the Modern Era** (5). The modernization and nationalization of Mexico, with emphasis on the social history of Mexico's frontiers. HIST 488 and HIST 588 are equivalent courses. Students may not receive credit for both.
- HIST 489. Cuba and the Caribbean** (5). Foreign intervention and the domestic social structure of Caribbean America. HIST 489 and HIST 589 are equivalent courses. Students may not receive credit for both.
- HIST 490. Cooperative Education** (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. HIST 490 and HIST 590 are equivalent courses.
- HIST 496. Individual Study** (1-6). Prerequisite, permission of instructor.

HIST 497. Honors Individual Study (1-6).

Open to students accepted into the departmental honors program. This course may be repeated once, but no more than an over-all total of six credits per quarter is permitted.

HIST 498. Special Topics (1-6).

*The depth of coverage of the content of variable credit courses will vary according to the number of credits offered.

Undergraduate Courses/ Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: HIST 463.1 History of American Foreign Relations 1900 to 1941 (3-5).

HUMANITIES

Contact Person: Gerald J. Stacy
Language and Literature Building 408C

Humanities Courses

HUM 101. Exploring Cultures in the Ancient World (5). Prerequisite, grade of C- or above in ENG 101. An interdisciplinary exploration from literature, history, philosophy, and the arts of selected major ancient civilizations in Asia, Africa, Europe and the Americas from their beginnings through the fifteenth century.

HUM 102. Exploring Cultures From 16th Through 19th Centuries (5). Prerequisite, grade of C- or above in ENG 101. An interdisciplinary exploration of selected literature, history, philosophy, and the arts in Asia, Africa, Europe and the Americas from the sixteenth through the nineteenth centuries.

HUM 103. Exploring Cultures in Modern and Contemporary Societies (5). Prerequisite, grade of C- or above in ENG 101. An interdisciplinary exploration of literature, history, philosophy, and the arts of selected world civilizations of the twentieth century.

HUM 150. Introduction to Film and Video Studies (4). Overview of film and video studies including film viewing and analysis, motion picture language and film genres and production aspects.

HUM 298. Special Topics (1-6).

HUM 398. Special Topics (1-6).

HUM 498. Special Topics (1-6).

INDIVIDUAL STUDIES

Program Director: Linda Beath, Associate Vice President for Undergraduate Studies
Barge 303

Individual Studies Major (4100)

Bachelor of Arts
Bachelor of Science
Bachelor of Music

General Program Information

Students interested in pursuing an area of scholarly inquiry which falls outside the purview of an established academic department or program of the University may apply for admission to the Individual Studies program. This academic program offers students an opportunity to develop, under the guidance of faculty advisors, a major which meets their specific needs. The program is available in the Bachelor of Arts, Bachelor of Music and Bachelor of Science degrees. Major areas of study are typically interdisciplinary.

Detailed written procedures and advice about preparing a proposal are available at cwu.edu/~avpugrad/individualstudy.html. The proposal must include a title, statement of purpose, a listing of courses which comprise the major, and support from a faculty advisor. The Course of Study should include courses from at least two separate subject areas and total at least 60 credits. All proposal materials must be submitted to the Associate Vice President for Undergraduate Studies at least three quarters prior to anticipated graduation, unless otherwise stipulated by the Associate Vice President for Undergraduate Studies. Proposals are subject to the review and approval of an advisory committee which meets quarterly.

Application forms, guidelines and policies are available at cwu.edu/~avpugrad/individualstudy.html. Completed forms are turned in to the Office of the Associate Vice President for Undergraduate Studies, Barge 303.

Individual Studies Courses

IS 193. Field Study (1). Prerequisite, permission of the Associate Vice President for Undergraduate Studies. Field research projects and report writing.

IS 290. Cooperative Education (1-5). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated to a maximum of 10 credits.. Grade will be S or U.

IS 296. Individual Study (1-6). Prerequisite, permission of the Associate Vice President for Undergraduate Studies.

IS 298. Special Topics (1-6). Prerequisite, permission of the Associate Vice President for Undergraduate Studies.

IS 487. End-of-Program Assessment (1). Prerequisite, senior standing and permission of Associate Vice President for Undergraduate Studies. An individual study for students enrolled in the individual studies major program. Grade will be S or U.

IS 496. Individual Study (1-6). Prerequisite, permission of Associate Vice President for Undergraduate Studies.

IS 498. Special Topics (1-6). Prerequisite, permission of Associate Vice President for Undergraduate Studies.

INDUSTRIAL AND ENGINEERING TECHNOLOGY

Faculty

Chair: Walt Kaminski
Hogue 107

Professors

William Bender, Construction Management
David Carns, Construction Management
Walter Kaminski, Mechanical Engineering Technology
Tim Yoxtheimer, Electronics

Associate Professors

Craig Johnson, Mechanical Engineering Technology
Lad Holden, Electronics
T.Q. Yang, Electronics

Assistant Professors

Scott Calahan, Industrial Education
Carlos Oncina, Mechanical Engineering Technology
Joe Price, Safety & Health Management

Emeritus Professor:

G.W. Beed, Mechanical Engineering Technology, Foundry
Robert Wieking, Power, Professional

Lecturers:

Jeannette Jacobson, Safety and Health Management
Juan Robertson, MSET

New positions to be filled by fall quarter, 2004:

EET Professor (TBA)

General Departmental Information

The curricula of the Department falls into three categories: Engineering Technology, Industrial Technology and Industrial Education.

Engineering Technology is a baccalaureate degree program. It is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in a support of engineering activities; it lies in the occupational spectrum between the craftsman and the engineer at the end of the spectrum closest to the engineer.

Industrial Technology is a baccalaureate degree program designed to prepare individuals for technical managerial, production supervisory, and related types of professional leadership positions. The curriculum, even though built on technical education, has a balanced program of studies drawn from a variety of disciplines relating to industry. Included are a sound knowledge and understanding of materials and manufacturing processes, principles of distribution, and concepts of industrial management and human relations; experience in communications skills, humanities, and social sciences, and a proficiency level in the physical sciences, mathematics, design, and technical skills to permit the graduate to capably cope with typical technical, managerial, and production problems.

Industrial Education curriculum leads to the degree of Bachelor of Science for one of the following: industrial art teachers at junior and senior high school levels; or individuals who are, or plan to become, teachers in either a community college or other trade and industrial or technical programs and who, in addition to state requirements, need or desire a college degree.

Students desiring vocational certification should see their major advisor about additional requirements.

The Industrial and Engineering Technology department also offers a Master's Degree in Engineering Technology. See the Graduate Studies section of this catalog.

Bachelor of Science

Construction Management Major (2105)

Advisors: D. Carns (Coordinator), W. Bender

The Construction Management program is fully accredited by the American Council for Construction Education (ACCE), and also is a member of the Associated Schools of Construction (ASC).

This major prepares the graduate for management positions in the construction industry. Recent graduates are working in

cost estimating, project scheduling, cost control, and project management. Students selecting this major should have a basic background in mathematics, physics, and chemistry. In the absence of an appropriate background the student may find it necessary to take MATH 154. Students must be accepted into the major prior to taking upper division CMGT courses. Major applications are accepted on October 15 each year. Students pursuing this degree should work closely with their program advisor to assure that prerequisites for entry into the major have been satisfied. Due to the number of hours in this program, some students may find that this program requires additional time to complete.

Required Courses	Credits
CMGT 245, Light Commercial Construction (5) OR CMGT 480, Heavy, Civil and Highway Construction (4) . . .	4-5
CMGT 265, Blueprint Reading and Construction Graphics	4
CMGT 267, 267L, Plane Surveying/Lab . . .	3,1
CMGT 320, Electrical Systems Design.	3
CMGT 343, 343L, Construction Estimating I/Lab	3,1
CMGT 344, 344L, Construction Estimating II/Lab	3,1
CMGT 346, Construction Materials and Methods	4
CMGT 441, Wood and Steel Construction . .	4
CMGT 442, Building Service Systems	3
CMGT 444, Codes, Contracts and Specifications	4
CMGT 447, Construction Planning, Scheduling and Control.	4
CMGT 450, Soils and Foundations	4
CMGT 455, Principles of Construction Management	4
CMGT 460, Concrete Construction	4
CMGT 485, Construction Accounting, Finance and Contemporary Topics	4
CMGT 488, Professional Certification.	1
IET 161, Architectural CAD	3
IET 301, Engineering Project Cost Analysis .	4
IET 311, Statics	4
IET 312, Strength of Materials	4
IET 389, Technical Presentations	3
SHM 386, Occupational Safety and Health .	3
MATH 172, Calculus	5
MATH 173, Calculus	5
PHYS 181, 181LAB, General Physics	4,1
CHEM 181, General Chemistry OR CHEM 111, Introduction to Chemistry . . .	4
CHEM 181LAB, General Chemistry Laboratory OR CHEM 111LAB, Chemistry Laboratory	1
GEOL 101, 101LAB, Physical Geology OR GEOL 108, Introduction to Environmental Geology	5

IT 101, Computer Applications	3
ADMG 385, Business Communication and Report Writing	5
ECON 201, Principles of Economics Micro .	5
ACCT 301, Financial Accounting Analysis .	5
BUS 241, Legal Environment of Business . .	5
HRM 381, Management of Human Resources OR	
MGT 380, Principles of Management	5
COM 345, Business and Professional Speaking.	4

Total 137-138

Construction Management Courses

CMGT 245. Light Commercial Construction (5). Prerequisite, CMGT 265 or permission of the instructor. Construction of building foundations, commercial carpentry, and enclosing of wood frame structures. Students participate in construction of a building.

CMGT 265. Blueprint Reading and Construction Graphics (4). Prerequisite of instructor. Introduction to plan reading, construction terminology and the construction process. Extensive work with plans of significant scope. Not open to students with credit in CMGT 266.

CMGT 267. Plane Surveying (3). Prerequisites, MATH 154, IT 101, and CMGT 265. Corequisite, CMGT 267LAB. General surveying theory and practice pertaining to distance, elevation and angle measurement. Includes traverse calculations and an emphasis on construction applications.

CMGT 267LAB. Plane Surveying Field Session (1). Corequisite, CMGT 267. One surveying field session weekly.

CMGT 320. Electrical Systems Design (3). Prerequisite, MATH 172 or permission of instructor. Design and specification of building electrical systems including circuit principles, power distribution and low voltage controls.

CMGT 343. Construction Estimating I (3). Prerequisites, CMGT 265 and IT 101. Corequisite, CMGT 343LAB. Quantity surveying and bid preparation for general construction. Use of cost handbooks, specifications and bid documents.

CMGT 343LAB. Construction Estimating I Laboratory (1). Corequisite, CMGT 343. One estimating computer laboratory session weekly.

CMGT 344. Construction Estimating II (3). Prerequisite, CMGT 343. Corequisite, CMGT 344LAB. Advanced quantity surveying and bid preparation for general construction.

CMGT 344LAB. Construction Estimating II Laboratory (1). Corequisite, CMGT 344. One estimating computer laboratory session weekly.

CMGT 346. Construction Methods and Materials (4). Prerequisite, CMGT 265. Materials commonly used and the various methods employed in construction. Introduction to materials testing.

CMGT 441. Wood and Steel Construction (4). Prerequisites, IET 312, and CMGT 346. A comprehensive study of the materials, design and erection of wood and steel structures.

CMGT 442. Building Service Systems (3). Prerequisite, CMGT 344. An introduction to building service systems. Study the interfaces and specifications of mechanical and plumbing systems in building construction. Topics include; plumbing, fire suppression, storm drainage, heat gain/loss, heating and cooling systems, and elevators.

CMGT 444. Codes, Contracts and Specifications (4). Prerequisites, CMGT 343, BUS 241 and ENG 102. Construction contracts and liability, bonding, arbitration, specifications, and building codes administration.

CMGT 447. Construction Planning, Scheduling and Control (4). Prerequisites, CMGT 343 and IT 101. Project scheduling and evaluation using network scheduling techniques, including critical path scheduling. Includes short interval scheduling and cash flow forecasting.

CMGT 450. Soils and Foundations (4). Prerequisites, IET 312 and CMGT 346 and GEOL 101, GEOL 101LAB or GEOL 108. An introduction to soil mechanics and analysis and design of both shallow and deep foundations..

CMGT 455. Principles of Construction Management (4). Prerequisites, CMGT 447 and CMGT 444. Fundamental tools of construction management. Topics; contract management, scheduling, cost estimating, cost control, conflict management, negotiating, team building, quality control, safety, and a capstone project.

CMGT 460. Concrete Construction (4). Prerequisites, CMGT 346, CMGT 441 and CHEM 181. Manufacturing and testing of concrete; field practices; and formwork. Two hours lecture and two hours laboratory per week.

CMGT 480. Heavy, Civil, and Highway Construction (4). Prerequisites, CMGT 344 and CMGT 346. Study of the Heavy, Civil, and Highway construction techniques and equipment used to build infrastructure projects such as highways, bridges, and site development.

CMGT 485. Construction Accounting, Finance and Contemporary Topics (4).

Prerequisite, CMGT 444. Project cost accounting principles, applications and impact on profitability. Includes principles of activity based costing; WBS, earned value, cash management, value engineering and contemporary topics.

CMGT 488. Professional Certification (1). Prerequisite CMGT 444. A comprehensive review of professional construction management principles and technical skills in preparation for a national certification examination.

CMGT 495. Construction Management Competition Preparation (1). Prerequisite, CMGT 344. Students work in teams to prepare for Construction Management competition. Teams develop cost, schedule, site layout and safety plans for a major construction project. Students will compete in the Associated Schools of Construction. Grade will be S or U. May be repeated to a maximum of 3 credits.

CMGT 499. Seminar (1-5). May be repeated.

Bachelor of Science

Electronics Engineering Technology Major with Specialization (2790)

Advisor: L. Holden (Coordinator),
T. Q. Yang, T. Yoxthimer

The Electronic Engineering Technology degree is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering Technology (TAC/ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone (410) 347-7700.

The technologists graduating from this program are applications oriented, building upon a background of mathematics, science and technology. They interface with engineers at the product level and produce practical, workable results quickly; install and operate technical systems; devise hardware and software from proven concepts; develop and produce products; service machines, programs, and systems; manage production facilities and work groups; and provide support for technical systems hardware and software.

The core of the major's coursework is electronics, digital principles, programming, math, and science. There are two specializations; Computer Engineering Technology for students specializing in software, and Electronic Systems for those specializing in hardware.

Students interested in engineering courses after graduation should complete PHY 211, 212, 213 and MATH through differential equations.

Students pursuing this degree should work

with the departmental advisors to assure that they have met the prerequisites for the upper-division electives. Due to the number of hours required, some students may find that this program requires additional time to complete.

Electronics Engineering Technology

Required Core Courses	Credits
EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
EET 312, Basic Electronics	4
EET 314, Network Analysis	4
EET 322, Intermediate Electronics	4
EET 371, Digital Circuits	4
EET 372, Advanced Digital	4
EET 375, Microprocessor Applications	4
EET 376, Microprocessors and Instrumentation	4
CS 110, Programming Fundamentals I (or approved substitute)	4
CS 111, Programming Fundamentals II (or approved substitute)	4
IET 301, Engineering Project Cost Analysis	4
IET 380, Quality Control	5
IET 389, Technical Presentations	3
MATH 172, Calculus	5
MATH 173 Calculus	5
MATH 265, Linear Algebra	4
Math Elective, select one:	3-5
MATH 260, Sets and Logic (5)	
MATH 330, Discrete Mathematics (5)	
MATH 272, Multivariable Calculus (5)	
MATH 311, Statistical Concepts and Methods (5)	
MATH 376, Differential Equations (3)	
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB, Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics	15
Written Communications Elective	3-5
CS 325, Technical Writing in Computer Science (3)	
ENG 310, Technical Writing (4)	
ADMG 385, Business Communication and Report Writing (5)	

EET Core Total 87-91

Computer Engineering Technology Specialization (2792)

Advisors: Lad Holden, James Schwing,
Tim Yoxthimer

Required Courses	Credits
EET Core Requirements	87-91
CS 301, Data Structures	4
CS 302, Advanced Data Structures and File Processing	4

CS 311, Computer Architecture I	4
CS 450, Computer Network and Data Communications	4
CS 470, Operating Systems	4
CS 473, Parallel Computing	4
CS 489, Senior Colloquium	1
Department-Approved Technical Electives	18-22
Total	134

**Electronic Systems
Specialization (2794)**

Advisors: Lad Holden, Tim Yoxtheimer,
T. Q. Yang

Required Courses	Credits
EET Core Requirements	87-91
EET 323, Active Linear Circuits	4
EET 324, Advanced Electrical Networks	4
EET 332, Electric Power and Machinery	4
EET 342, Instrumentation	4
EET 343, Process Control	4
EET 370, Microprocessor Assembly Language	3
EET 489, Senior Technical Presentations	2
Department Approved Technical Electives	18-22
Total	134

**Electronic Engineering
Technology Courses**

- EET 221. Basic Electricity (3).** Prerequisite, MATH 162 or MATH 153. Corequisite, EET 221LAB. Fundamental principles of electricity, Ohms law, Kirchoffs laws, and the power equation applied to DC and AC circuits.
- EET 221LAB. Basic Electricity Laboratory (1).** Co-requisite EET 221. Basic principles of electrical measurement and testing of DC and AC Circuits. Three hours laboratory per week.
- EET 312. Basic Electronics (4).** Prerequisites, EET 221 and EET 221LAB. Solid state electronic devices and their application to power supplies and amplification utilizing both discrete and integrated circuit techniques. Lecture/laboratory.
- EET 314. Network Analysis (4).** Prerequisites, EET 221, EET 221LAB, MATH 162 or MATH 154. Network analysis techniques including computer solutions, loop and nodal equations, complex impedance. Thevenin and Norton equivalents, superposition, and Gauss elimination. Lecture/laboratory.
- EET 322. Intermediate Electronics (4).** Prerequisite, EET 312 or permission of

instructor. Linear circuits utilizing discrete and integrated components. FET's, SCR's, multistage systems, oscillators, regulators, timers and op-amps. Two hours lecture and four hours laboratory per week.

- EET 323. Active Linear Circuits (4).** Prerequisites, EET 322 or equivalent and MATH 172. Analysis and design of multistage transistor amplifier with emphasis on the operational amplifier and its applications. Low-frequency and high-frequency limitations, Miller effect, pulse testing, Bode Plots, Nyquist stability criteria. Barkhausen criteria for oscillation. Power amplifiers, heat sinks, integrated circuit voltage regulators.
- EET 324. Advanced Electrical Network (4).** Prerequisites, EET 314, EET 370, MATH 173. An advanced course in analysis techniques applied to dynamic systems. Solution of time and frequency domain problems stressing the relationship between electrical and mechanical systems, including linear differential equations and transformation techniques.
- EET 332. Electrical Power and Machinery (4).** Prerequisite, EET 221 and EET 221LAB or equivalent. A study of power transformers, single and polyphase circuits. The study of DC machines and AC single and polyphase synchronous and induction machines.
- EET 342. Instrumentation (4).** Prerequisite, EET 312. Analysis of instrumentation systems in the broad context of signal conditioning and data collection. Accuracy, transducers, analog and digital signal conditioning, information transmission and data collection. Lecture/laboratory.
- EET 343. Process Control (4).** Prerequisite, EET 342. Application of analog and digital controller principles to process control systems. Three hours lecture and two hours laboratory per week.
- EET 361. MATLAB Applications (1).** An introduction to MATLAB computation software applications, functions, and graphics.
- EET 362. Electronics Workbench Applications (1).** An introduction to Electronic Workbench circuit simulation software. Techniques used to simulate AC and DC electric and electronic circuits will be introduced.
- EET 363. Lab View Applications (1).** An introduction to Lab VIEW instrumentation software. Techniques used to simulate instrumentation systems will be introduced.
- EET 370. Microprocessor Assembly Language (3).** A basic introduction to microprocessors and their programming using assembly language.
- EET 371. Digital Circuits (4).** An introduction to number systems, logic equations, Boolean algebra, DeMorgan's theorem, Karanugh Maps, Quine-McClusky reduction techniques, and combination logic elements.

Three hours lecture and two hours laboratory per week.

- EET 372. Advanced Digital Circuits (4).** Prerequisite, EET 371 or equivalent. Analysis of electronic digital circuits. Topics include: Bipolar and MOS logic gates, loading and interfacing, counters, adders, memories, encoders, decoders, digital displays, AD and DA converters. Two hours lecture and four hours laboratory per week.
- EET 375. Microprocessor Applications (4).** Prerequisites, EET 312. Examine and compare the basic components of microprocessor systems as applied to numerical control and robotics. Three hours lecture and two hours laboratory per week.
- EET 376. Microprocessors and Instrumentation (4).** Prerequisite, EET 375 or equivalent. Use of microprocessors and related components in the design of microprocessor-based systems. Interfacing of microprocessors and measuring instruments are studied. Consideration is given to the trade-offs between hardware and software.
- EET 418. Electronic Fault Detection (2).** Prerequisite, EET 376. Advanced testing of analog and digital systems. Both manual and automatic test systems will be considered. One hour lecture and three hours laboratory per week.
- EET 432. Generation and Transmission of Electrical Power (4).** Prerequisite, EET 332. A study of the generation and transmission of electrical energy. Includes techniques used by electric utilities for the protection of generating equipment and transmission lines, an introduction to the economic considerations of power plant operation and three-winding transformers, and methods of solving unbalanced three-phase systems.
- EET 445. Electro-Mechanical Controls (4).** Prerequisites, EET 324 and EET 343 or equivalent. A study of the components in open-loop and closed-looped systems. Included are sensing devices, error detectors, potentiometers, synchors, resolvers, modulators, demodulators, amplifiers, motors, generators, and network. An analysis course that stresses operation time and frequency-response characteristics, and proper adjustment of the components.
- EET 451. Communications - Optical Systems (4).** Prerequisite, EET 323. Application of fiber optics to communications systems including measurement of parameters, sources, detectors, construction of fiber optic communication links. Three hours lecture and two hours laboratory per week.
- EET 452. Communications - Local Area Networks (4).** Prerequisites, EET 323 and 375 or permission. Local Area Network communication systems, Manufacturing-Automation-Protocol, time domain to frequency domain conversions, and modulation techniques. Three hours lecture and two hour hours laboratory per week.

EET 453. Communications - Microwave Systems (4). Prerequisite, EET 323. Analysis of the radiation and propagation of the communication signal, and the application of antennas for impedance matching and for providing systems gain. Two hours lecture and four hours laboratory per week. Formerly ELT 473. Students may not receive credit for both.

EET 455. Electronic Communications (4). Prerequisite, EET 322 or permission of instructor. An introduction to electronic communications circuits. Two hours lecture and four hours laboratory per week.

EET 476. Mini-Computer Technology (4). Prerequisite, EET 376. Analysis of mini-computer circuits. Organization of circuits into a complete computing system. Special purpose assembly language programming techniques for location of circuit malfunctions with the aid of computer maintenance manuals and laboratory equipment. Three hours lecture and two hours laboratory per week.

EET 477. Robotics (4). Prerequisites, EET 375 and EET 342. Microprocessor applications in robotics, automated systems, and digital control. Three hours lecture and two hours laboratory per week.

EET 478. Senior Project I (2). Prerequisite, permission of instructor. An extensive individual design and/or analytical project performed in consultation with one or more faculty advisor. Collaboration with representatives of industry, government agencies, or community institutions is encouraged. Evidence of extensive and thorough laboratory performance is required.

EET 479. Senior Project II (2). Prerequisite, EET 478. An extensive individual design and/or analytical project performed in consultation with one or more faculty advisor. Collaboration with representatives of industry, government agencies, or community institutions is encouraged. Evidence of extensive performance is required.

EET 489. Senior Technical Presentations (2). Prerequisites, senior standing and completion of the technical core.

**Bachelor of Science
Industrial Technology Major
(4200)**

Advisors: T. Yoxtheimer (Coordinator), S. Calahan, K. Calhoun, C. Johnson, C. Oncina

This major prepares the graduate for leadership positions in industry and technical distribution. The program applies algebra, trigonometry and the physical sciences to industrial systems. Graduates select 40-41

credits by advisement in an area of technical specialization. Specializations exist in Industrial Distribution, Industrial Electronics, Industrial Manufacturing, Power Systems, Cast Metals, Metal Fabrication, Non-destructive Testing, Wood Production and specializations by departmental advisement.

Students pursuing this degree should work closely with their department advisor to assure that they have met the prerequisites for the upper division electives.

Required Courses	Credits
IET 160, Computer Aided Design	4
IET 301, Engineering Project Cost Analysis .	4
IET 380, Quality Control	5
IET 385, Industrial Design	3
IET 389, Technical Communications	3
EET 221, 221LAB, Basic Electricity (with laboratory)	3,1
EET 312, Basic Electronics	4
MET 310, Hydraulics/Pneumatics	4
MET 345, Production Technology	4
MET 351, Metallurgy/Materials & Processes	4
SHM 386, Occupational Safety and Health .	3
MATH 154, Pre-Calculus Mathematics II...	5
PHYS 111, 111LAB, Introductory Physics/Lab.	5
CHEM 111, 111LAB, Introduction to Chemistry/Lab OR CHEM 181, 181LAB, General Chemistry	5
IT 101, Computer Applications	3
ADMG 385, Business Communications and Report Writing (5) OR ENG 310, Technical Writing (4)	4-5
Computer Elective (IET Department approved)	4
Sub Total	68-69

Technical Specialization By advisement	Credits
Sub Total	41-42
Total	110

Transfer students MUST complete a minimum of 25 credits from the IET Department.

**Industrial Technology Minor
(4200)**

Advisors: T. Yoxtheimer

Courses to be selected from Industrial Technology Department courses under Department advisement.

Total 25

**Industrial and Engineering
Technology Courses**

IET 101. Modern Technology (5). A study of how basic scientific principles are applied daily in industrial societies through a survey of transportation, electrical power, construction, and consumer product technologies.

IET 145. Machine Woodworking (4). Machine and tool operations, wood technology, designing and construction principles, finishing methods and materials. Two hours lecture and four hours laboratory per week.

IET 160. Computer Aided Design and Drafting (4). Hands-on training in the operation of AutoCAD's design and drafting software system with emphasis on features, limitations and dimensioning strategy.

IET 161. Architectural Computer Aided Design (3).

IET 165. Engineering Drawing I (4). Fundamentals of orthographic projection, isometric drawings, applied geometry, sections, auxiliary view, developments, lettering and drawing reproductions. Two hours lecture and three hours laboratory per week.

IET 210. Energy Sources and Power (3). A study of the various forms of power, its generation, application and implications for technology and a technological society.

IET 215. Small Engines (4). Prerequisite, IET 210 or permission of instructor. Maintenance and repair of one and two cylinder internal combustion engines. Two hours lecture and four hours laboratory per week.

IET 219. Engine Performance Measurement (4). Prerequisite, IET 210 or permission of instructor. Vehicle fuel and ignition systems and their import on heat. Two hours lecture and four hours laboratory per week.

IET 265. Three-Dimensional Modeling (4). Prerequisites, IET 160 and IET 165 or permission of instructor. Design of parts, assemblies and working drawings using 3-D solid modeling software, basic theory of threaded fasteners and gears, welding representation and geometric dimensioning and tolerancing. Two hours lecture and four hours laboratory per week.

IET 290. Cooperative Education (1-15). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

- IET 296. Individual Study (1-6).** Prerequisite, permission of instructor. May be repeated.
- IET 298. Special Topics (1-6).**
- IET 299. Seminar (1-5).** May be repeated.
- IET 301. Engineering Project Cost Analysis (4).** Techniques of economic cost analysis applied to engineering projects: interest, present value, annual equivalence, rate of return, payout criteria, and break even modeling.
- IET 311. Statics (4).** Prerequisites, PHYS 111, 211 and MATH 173 or permission of instructor. Introductory statics including forces and equilibrium. Principles of structures including trusses, beams, frames, machines and friction. Formerly CMGT 314/MET 214. Students may not receive credit for both.
- IET 312. Strength of Materials (4).** Prerequisite, IET 311. Strength of materials, including stress analysis of axially loaded members, torsional members, beams and indeterminate structures. Formerly CMGT 315/MET 215. Students may not receive credit for both.
- IET 315. Vehicle Electric Systems (4).** Prerequisite, IET 210. Starting, charging, regulation, ignition, and onboard microprocessor systems as used in automobiles, industrial materials handling vehicles, and recreational vehicles. Two hours lecture and four hours laboratory per week.
- IET 341. Furniture Construction (4).** Prerequisite, IET 145 or permission of instructor. Design and construction of contemporary furniture. Individual problems. Two hours lecture and four hours laboratory per week.
- IET 353. Pattern Making (4).** Prerequisite, MET 257 or permission of instructor. Two hours lecture and four hours laboratory per week.
- IET 373. Programmable Logic Controller Applications (4).** Prerequisite, permission of instructor. A study of programmable logic controller concepts, components, systems, programming and applications. Three hours lecture and two hours laboratory per week.
- IET 380. Quality Control (5).** Prerequisite, BUS 221 or permission of instructor. Provides the foundation necessary to understand and apply statistical quality control techniques, product reliability procedures and the management aspects of quality assurance.
- IET 384. Industrial Processes and Materials (3).** A technical study of modern industrial materials and processes used in manufacturing. Metallic and nonmetallic materials are treated along with industrial aspects of each.
- IET 385. Industrial Design (3).** Principles of design as related to materials and construction methods, and their application to industrial problems. Three hours lecture per week.
- IET 386. Materials Characterization (4).** Prerequisites, intermediate algebra or equivalent or permission of instructor. Studies of material properties with emphasis on concepts, specifications, procedures, measurement, quantification and reporting. Laboratory activities include strength, hardness, impact and non-destructive testing.
- IET 389. Technical Presentations (3).** Prerequisite, permission of instructor. Written and oral presentations based on technical reference material utilizing the library, technical society publications, and the Internet.
- IET 398. Special Topics (1-6).**
- IET 411. Mechanical Power Transmission (4).** Prerequisite, permission of instructor. Design, analysis and construction of mechanical power transmission systems. Emphasis on design principles and calculations, product knowledge, use of catalogues and references, and troubleshooting techniques. Laboratory experiences include work on gear drives, chain, belt and couplings. Two hours lecture and four hours laboratory per week.
- IET 415. Air Logic (4).** Prerequisites, EET 221, 221L and MET 310. Techniques of pneumatic logic control, design, analysis, proof, circuit layout, building and troubleshooting. Two hours lecture and four hours laboratory per week.
- IET 430. Methods of Teaching Industrial Education (3).**
- IET 433. Industrial Education Laboratory Planning (3).** Planning of school shop and labs, new construction and remodeling of facilities. Management of industrial education facilities, inventories: records of tools, equipment, materials; safety and student personnel.
- IET 446. Shop and Tool Maintenance (3).** Prerequisites, IET 145 and 255, or permission of instructor. Adjustment, maintenance, and repair of industrial machines. Demonstrations and lectures by factory representatives. Two lectures and two hours laboratory per week.
- IET 448. Cabinetmaking (3).** Prerequisites, IET 145 and 345 or permission of instructor. Design, construction and finishing of kitchen, bath and utility cabinets.
- IET 457. Advanced Foundry (4).** Prerequisite, MET 257, IET 353, or permission of instructor. Two hours lecture and four hours laboratory per week.
- IET 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- IET 491. Workshop (1-6).**
- IET 495. A,B,C. Senior Project I,II,III (2,2,2)** Prerequisites, senior standing and permission of Department Chair. Must be taken in sequence. Application and integration of previous course material in the solution of industrial problems. Results of the project to be presented to the Department in writing and orally before the technology faculty, students and selected industrial representatives. Part I of the project includes methods design, materials selection, engineering and preliminary costs. Part II includes manufacturing concepts, physical facilities, production equipment, personnel requirements, and PERT or CPM. Part III includes finance, quality control and distribution.
- IET 496. Individual Study (1-6).** Prerequisite, permission of instructor. May be repeated.
- IET 498. Special Topics (1-6).**
- IET 499. Seminar (1-5).** May be repeated.

Bachelor of Science

Mechanical Engineering

Technology Major

with Specialization (5200)

Advisor: C. Johnson, (Coordinator),
W. Kaminski, C. Oncina.

The Mechanical Engineering Technology degree is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering Technology (TAC/ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone (410) 347-7700.

The Industrial and Engineering Technology Department offers a Bachelor of Science degree in Mechanical Engineering Technology (MET) with specializations in Mechanical or Manufacturing Technology. The major provides a broad foundation in the practical application of mechanical engineering principles. Graduates concentrating in Mechanical Technology may pursue one of the following career paths: machine and product design, product and system evaluation, plant operation and management, technical sales, field service, environmental quality control and energy production. Graduates specializing in Manufacturing Technology are prepared to

enter career paths as tool designers, tool and production planners, numerical control programmers, machine planners, computer assisted machine planners, manufacturing process analysts, quality assurance, and technical field representatives.

In the absence of an appropriate background, the student may find it necessary to take IET 165, Engineering Drawing I. Those students who are interested in engineering courses after graduation should complete the engineering physics sequence (PHYS 181, 182, 183) and mathematics through differential equations.

Due to the number of hours in this program, some students may find that this program requires additional time to complete. Students pursuing this degree should work with the departmental advisor to assure that the prerequisites for the upper division electives have been met.

Mechanical Engineering Technology Core Requirements

Courses	Credits
MATH 153, Pre-Calculus Mathematics I OR technical elective	5
MATH 154, Pre-Calculus Mathematics II OR technical elective	5
MATH 172, Calculus	5
MATH 173, Calculus	5
PHYS 181, 181LAB, or PHYS 111, 111LAB, General or Introductory Physics.	5
PHYS 182, 182LAB, or PHYS 112, 112LAB, General or Introductory Physics.	5
PHYS 183, 183LAB or PHYS 113, 113LAB General or Introductory Physics.	5
CHEM 181, General Chemistry	4
CHEM 181LAB General Chemistry Laboratory	1
ENG 310, Technical Writing	4
COM 345, Business and Professional Speaking	4
Computer Science Elective	4
IET 160, Computer Aided Design and Drafting	4
IET 265, Three-Dimensional Modeling	4
IET 311, Statics	4
IET 312, Strength of Materials	4
EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
MET 255, Machining	4
MET 314, Applied Thermodynamics	4
MET 314LAB, Applied Thermodynamics Laboratory	1
MET 315, Fluid Mechanics	5
MET 426, Applications in Strength of Materials	2
MET 327, Technical Dynamics	4
MET 327LAB, Technical Dynamics Laboratory	1

MET 351, Metallurgy/Materials and Processes	4
MET 418, Mechanical Design I	5
MET 419, Mechanical Design II	5
MET 495A, B, C, Senior Project	6

MET Core Total 113

Mechanical Technology Specialization (5201)

Advisors: C. Johnson, C. Oncina,
W. Kaminski

Required Courses	Credits
MET Core Requirements	113
MET 316, Applied Heat Transfer	5
MET 411, Energy Systems	5
EET 332, Electrical Power and Machinery	4
Department approved technical electives selected from the following:	8-9
IET 301, Engineering Project Cost Analysis (4)	
MET 320, Fundamentals of Laser Technology (4)	
EET 342, Instrumentation (4)	
MET 382, Plastics and Composite Materials (4)	
MET 412, Alternative Energy Systems (5)	
MET 420, Finite Element Analysis (4)	
MET 423, Computer Aided Design and Manufacturing (4)	
MET 483, Ceramics and Composites (4)	
Total	135-136

Manufacturing Technology Specialization (5202)

Advisors: C. Johnson, C. Oncina,

Required Courses	Credits
MET Core Requirements	113
MET 423, Computer Aided Design and Manufacturing	4
MET 345, Production Technology	4
MET 355, Advanced Machining and NC Programming	4
MET 388, Tool Design	4
Department approved technical electives selected from the following:	8
MET 257, Casting Processes (4)	
MET 357, Welding (4)	
MET 310, Hydraulics/Pneumatics (4)	
IET 380, Quality Control (5)	
MET 382, Plastics and Composite Materials (4)	
MET 483, Ceramics and Composites (4)	
OMIS 221, Introductory Business Statistics (5)	
Total	137

Mechanical Engineering Technology Courses

MET 255. Machining (4). Basic operations and technical information concerning common metal working machines and metal machining processes. Two hours lecture and four hours laboratory per week.

MET 257. Casting Processes (4). Theory and practice in green sand, shell core, permanent mold, no bake and evaporation casting processes. Two hours lecture and four hours laboratory per week. Formerly IET 257. Students may not receive credit for both.

MET 310. Hydraulics/Pneumatics (4). Prerequisite, IET 210 or permission of instructor. A study of the application, controls and uses of air and liquid for the transmission of power. Two hours lecture and four hours laboratory per week. Formerly IET 310. Students may not receive credit for both.

MET 314. Applied Thermodynamics (4). Prerequisite PHYS 182 or PHYS 112 and MATH 173; corequisite MET 314LAB. Properties of pure substances, first and second laws of thermodynamics, enthalpy and entropy, perfect gases, Carnot cycle, steam cycles, refrigeration cycles, mixtures of perfect gases, chemical reactions and combustion. Four hours lecture per week.

MET 314LAB. Applied Thermodynamics Laboratory (1). Prerequisites, PHYS 182 or 112 and MATH 173; corequisite, MET 314 or permission of instructor. Practical application of thermodynamics systems teaching First and Second Law of Thermodynamics principles. Lab work includes usage of state-of-the-art instrumentation and data systems.

MET 315. Fluid Dynamics (5). Prerequisite MET 314. Fluid statics, continuity, Bernoulli and the general energy equation, laminar and turbulent flow, friction losses in pipes and ducts, pump performance and selection, compressible flow, and fluid measurements. Four hours lecture and two hours laboratory per week.

MET 316. Applied Heat Transfer (5). Prerequisite, MET 314. Steady and unsteady state heat conduction, free convection, forced convection in tubes, forced convection over exterior surfaces, radiation heat transfer, change in phase heat transfer, heat exchangers and heat pipes. Four hours lecture and two hours laboratory per week.

MET 320. Fundamentals of Laser Technology (4). Prerequisite PHYS 113 or permission of instructor. Overview of laser technology with emphasis on laser characteristics, safety and applications. Four hours lecture per week. Formerly IET 320. Students may not receive credit for both.

MET 327. Technical Dynamics (4). Prerequisite, IET 311 or permission of instructor, corequisite, MET 327LAB. Topics: rectilinear

and curvilinear motion, rotational kinematics, work, energy and power, linear impulse and momentum, angular impulse and momentum, rigid body motion, relative motion and vibrations. Formerly MET 213. Students may not receive credit for both.

MET 327LAB. Technical Dynamics Laboratory (1). Prerequisite, IET 311; corequisite, MET 327 or permission of instructor. Practical application of dynamical systems including usage of state-of-the-art instrumentation and data recording systems.

MET 345. Production Technology (4). Prerequisite, permission of instructor. Mass production principles, organization for production, product engineering, production system design, jig and fixture development, special problems in production. Formerly IET 345. Students may not receive credit for both.

MET 351. Metallurgy/Materials and Processes (4). Prerequisites, CHEM 181 and CHEM 181LAB or permission of instructor. Ferrous and nonferrous metals and alloys; polymeric, ceramic and cellular materials; use of phase diagrams, cooling curves, stress-strain diagrams and metallography. Formerly IET 351. Students may not receive credit for both.

MET 355. Advanced Machining and CNC Programming (4). Prerequisite, MET 255 or permission of instructor. Machining of metallic and non-metallic materials on automated equipment; mass production technology; programming and operation of CNC equipment. Formerly IET 355. Students may not receive credit for both.

MET 357. Welding/Fabrication (4). Theory and practice in arc welding, oxyacetylene welding and cutting, MIG, TIG, and plastic welding. Two hours lecture and four hours laboratory per week. Formerly IET 357. Students may not receive credit for both.

MET 382. Plastics and Composites (4). Prerequisite, CHEM 111 and CHEM 111LAB or CHEM 181 and CHEM 181LAB. Composition, characteristics and classifications of plastics and composite materials incorporating industrial applications, processing and fabrication. Formerly IET 382. Students may not receive credit for both.

MET 388. Tool Design (4). Prerequisites, IET 160, IET 165, and MET 255 or permission of instructor. Principles of tool design for material removal, workholding, pressworking, joining and inspection processes with emphasis on inventive ability and problem solving. Formerly IET 388. Students may not receive credit for both.

MET 411. Energy Systems I (5). Prerequisite MET 316. Power generation, energy reserves, fuels, reciprocating machines, internal combustion engines, rotating compressors, axial flow turbines and gas turbine power. Four hours lecture and two hours laboratory per week.

MET 412. Alternative Energy Systems (5). Prerequisite permission of instructor. Comprehensive overview of alternative energy technology including societal issues, energy reserves, fossil, nuclear, solar, wind, geothermal, hydrogen and biomass energy sources, and advanced energy conversion systems.

MET 418. Mechanical Design I (5). Prerequisites, MET 426, MET 327, IET 265. Study of shafts, springs, couplings, clutches, bearings, cams, linkages and crank mechanisms. Four hours lecture and two hours laboratory per week.

MET 419. Mechanical Design II (5). Prerequisite, MET 418. Fasteners, welds, machine frames, pressure vessels, hydraulic cylinders, electrical motors and actuators. Four hours lecture and two hours laboratory per week.

MET 420. Finite Element Analysis (4). Prerequisites, IET 160, MET 326, or permission of instructor. Computerized modeling of structural, vibrational and thermal design problems. Two hours lecture and four hours laboratory.

MET 423. Computer Aided Design and Manufacturing (4). Prerequisites MET 418, IET 160 and MET 255 or permission of instructor. Integrates Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM). Three hours lecture and two hours laboratory per week.

MET 426. Applications in Strength of Materials (2). Prerequisite, IET 312 and MET 351. Topics support stress analysis and design. Laboratory activities include material strength, hardness, impact testing, strain gage technology, photoelasticity, ultrasonics and eddy current. Formerly MET 326. Students may not receive credit for both.

MET 483. Ceramics and Composites (4). Prerequisite, CHEM 111LAB or CHEM 181LAB. Composition, characterization and classification of ceramics and related composite materials incorporating industrial applications, processing and fabrication.

MET 495. A, B, C. Senior Project I, II, III (2,2,2). Prerequisites, senior standing and permission of MET advisor. Courses must be taken in sequence. The senior project is a capstone course that integrates all the major elements of the MET curriculum in a project related activity. The topic is chosen by the student in concurrence with the instructor and must include elements of planning, design and analysis (Phase I), construction (Phase II) and test and evaluation (Phase III). Collaboration with representatives of industry, government agencies or community institutions is encouraged. As an alternative, it will be possible to select a design study for the senior project for all three quarters, providing it is sufficiently comprehensive and approved by the MET advisor.

**Industrial Education
Broad Area Major (4160)**

Advisor: Scott Calahan

This major satisfies the endorsement for Technology Education.

Qualifies for teaching secondary industrial arts and technology education. Students selecting this major must have a basic background in industrial arts - woods, metals, and drafting; mathematics through trigonometry. One year high school proficiency in these subjects will normally suffice. Admission to this program requires that students must have completed CHEM 111, MATH 153 and PHY 111. (Equivalent courses will be allowed.) In absence of this background, courses may be taken at this University. IET 430 is a prerequisite for student teaching. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
IET 145, Machine Woodworking	4
IET 160, Computer Aided Design and Drafting	4
IET 210, Energy Sources and Power	3
MET 255, Metal Machining	4
IET 265, Three-Dimensional Modeling	4
EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
EET 312, Basic Electronics	4
EET 371, Digital Circuits	4
MET 345, Production Technology	4
MET 357, Welding/Fabrication	4
IET 385, Industrial Design	3
SHM 386, Occupational Safety and Health	3
MET 382, Plastics and Composites	4
IET 430, Methods in Teaching Industrial Education	3
IET 433, Industrial Education Laboratory Planning	3
IET 446, Shop and Tool Maintenance	3
Select from one of the following groups: 7-10	
Group I, General	
IET 341, Furniture Construction (4)	
MET 355, Advanced Machining and CNC Programming (4)	
EET 322, Intermediate Electronics (4)	
Group II, Wood	
IET 341, Furniture Construction (4)	
IET 353, Pattern Making (4)	
CMGT 245, Light Commercial Construction (5)	
IET 447, Wood and Metal Finishing (3)	
Group III, Drafting	
MET 388, Tool Design (4)	

Department approved electives (3-6)

Group IV, Metals

- MET 257, Casting Processes (4)
- MET 351, Metallurgy/Materials and Processes (4)
- MET 355, Advanced Machining and CNC Programming (4)
- IET 457, Advanced Foundry (4)

Group V, Electronics

- EET 322, Intermediate Electronics (4)
- EET 342, Instrumentation (4)
- EET 372, Advanced Digital (4)
- EET 455, Electronics Communication (4)

Group VI, Power

- IET 215, Small Engines (4)
- IET 219, Engine Performance Measurement (4)
- IET 315, Vehicle Electric Systems (4)
- IET 411, Mechanical Power Transmission (4)

Group VII, Occupational Cluster

1-15 credit hours. This cluster would allow transfer students from a community college to obtain credit for technical work taken at that institution in which we do not have similar programs here on campus.

Total 65-68

Industrial Education Major (4150)

Advisor: Scott Calahan

This major satisfies the endorsement for Technology Education.

Qualifies for teaching industrial technology education at the junior or senior high level. Students selecting this major must have a basic background equivalent to one year of high school wood, metals, and drafting and high school mathematics through trigonometry. Admission to this program requires that students must have completed CHEM 111, MATH 153, and PHY 111. (Equivalent courses will be allowed.) In absence of this background, courses may be taken at this University.

Required Courses	Credits
IET 145, Machine Woodworking	4
IET 160, Computer Aided Design and Drafting	4
IET 210, Energy Sources and Power	3
MET 255, Metal Machining	4
IET 265, Three-Dimensional Modeling	4
EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
EET 312, Basic Electronics	4
EET 371, Digital Circuits	4

MET 345, Production Technology	4
MET 357, Welding/Fabrication	4
IET 385, Industrial Design	3
IET 430, Methods in Industrial Education	3
IET 433, Industrial Education Laboratory Planning	3
Total	48

The IET Department strongly suggests for a student to be more competitive in the job market, the following additional courses should be taken.

- MET 382, Plastics and Composites
- SHM 386, Occupational Safety and Health
- IET 446, Shop and Tool Maintenance
- IET, Area of Concentration

Electronics - Computer Hardware Minor (2755)

Advisors: T. Yoxtheimer

Required Courses	Credits
*EET 221, Basic Electricity	3
EET 221LAB, Basic Electricity Laboratory	1
EET 312, Basic Electronics	4
EET 371, Digital Circuits	4
EET 372, Advanced Digital Circuits	4
EET 375, Microprocessor Applications	4
EET 376, Microprocessors/Instrumentation	4
EET 476, Minicomputer Technology	4

Total 28

*MATH 153 or MATH 162 is required for EET 221.

SAFETY AND HEALTH MANAGEMENT PROGRAMS

Faculty

Joe Price, Safety and Health Management Program
 Jeannette Jacobson, Program Coordinator, CWU-Lynnwood
 Scott Calahan, Traffic Safety Education (Summer Only)

Program Description:

Students desiring to major in the Safety and Health Management program will be ultimately prepared to obtain employment in a diverse range of occupations such as Occupational Safety Management, Industrial Hygiene, Environmental Management, Emergency Response and preparation, governmental agencies, private industry, and other aligned specializations. The curriculum incorporates a wide range of subjects important to the

successful performance of duties typically expected of professionals employed in this field, and will provide the student with an array of skills and knowledge to offer future employers. The program has a history of high employment rates, competitive starting salaries and presents significant opportunity for career advancement.

The Traffic Safety Education Minor is attached to the Safety and Health Management program and is geared at students seeking endorsement for teaching traffic safety education in public schools.

Bachelor of Science Safety and Health Management Program (SHM) (6910)

Advisors: Joe Price
 Jeannette Jacobson, CWU-Lynnwood

SHM Required Core Courses	Credits
PSY 456, Industrial and Organizational Psychology	4
SHM 386, Occupational Safety and Health	3
SHM 387, Accident Investigation	3
SHM 388, System Safety	3
SHM 389, Industrial Fire Protection and Prevention	3
SHM 444, Fundamentals of Hazardous Materials	4
SHM 483, Ergonomics	4
SHM 484, Environmental Management	4
SHM 485, Safety Management	4
SHM 486, Industrial Operations Safety	3
SHM 487, Fundamentals of Industrial Hygiene I	4
SHM 488, Fundamentals of Industrial Hygiene II	4
SHM 499, Seminar	1

Total Core 44

Construction Safety Specialization (6915)

Advisor: Joe Price

Required Courses	Credits
Core Courses	44
IT 101, Computer Applications	3
ADMG 201, Introduction to Business	3
ADMG 385, Business Communications and Report Writing	5
BUS 241, Legal Environment of Business	5
CHEM 112, Introduction to Organic Chemistry	4
CHEM 112LAB, Introduction to Organic Chemistry Lab	1
COM 345, Business and Professional Speaking	4
CMGT 265, Blueprint Reading and Construction Graphics	4

CMGT 343, 343L Construction Estimating I/Lab	3,1
CMGT 346, Construction Methods and Materials	4
CMGT 444, Codes, Contracts and Specifications	4
EET 221, Basic Electricity (3) and EET 221LAB, Basic Electricity Lab (1) OR PHYS 111, Introductory Physics (4) AND PHYS 111LAB, Intro Physics Lab (1)	4-5
IET 380, Quality Control (5) OR IET 301, Engineering Project Cost Analysis(4)	4-5
IET 430, Methods of Teaching Industrial Education	3
MATH 153, Pre-Calculus Mathematics I	5
Electives	3-5

Total Credits 104-105

Risk Management Specialization (6920)

Advisor: Joe Price

Core Courses	44
IT 101, Computer Applications	3
ADMG 201, Introduction of Business	3
ADMG 385, Business Communications and Report Writing	5
BUS 241, Legal Environment of Business	5
CHEM 112, Introduction to Organic Chemistry ..	4
CHEM 112LAB, Introduction to Organic Chemistry Lab	1
COM 345, Business and Professional Speaking ..	4
IET 430, Methods of Teaching Industrial Education	3
MGT 380, Organizational Management	5
HRM 381, Management of Human Resources	5
IET 380, Quality Control OR BUS 221, Introductory Business Statistics	5
Electives	19

Total Credits 106

Safety and Health Management Specialization (6925)

Advisors: Joe Price, Jeannette Jacobson, CWU-Lynnwood

Required Courses	Credits
Core Courses	44
ADMG 201, Introduction to Business OR SHM 491, Workshop (4)	3-4
ADMG 385, Business Communication and Report Writing	5
BUS 221, Introductory Business Statistics (5) OR SHM 498, Special Topics (4)	4-5
BUS 241, Legal Environment of Business (5) OR MGT 380, Organizational Management (5)	5

CHEM 111 and CHEM 111LAB, Introduction to Chemistry and Lab (5) OR HRM 381, Management of Human Resources (5)	5
COM 345, Business and Professional Speaking	4
IET 380, Quality Control	5
IET 389, Technical Presentations (3) OR SHM 490, Cooperative Education (3)	3
IET 430, Methods of Teaching Industrial Education	3
MGT 481, Organizational Behavior	5
SHM 383, Transportation Safety	3

Total 89-91

Collaborative Certificate Program Industrial Safety and Health

In cooperation with the Central Washington University Industrial and Engineering Technology department and the Office of Continuing Education the following series of courses are offered leading to a certificate in Industrial Safety and Health.

The certificate in Industrial Safety and Health is designed primarily for nonmatriculating students who are currently working in safety and health in business or industry and who may or may not have a four-year degree.

Required Courses	Credits
SHM 386, Occupational Safety and Health ..	3
SHM 387, Accident Investigation	3
SHM 388, System Safety	3
SHM 389, Industrial Fire Protection and Prevention	3
SHM 444, Fundamentals of Hazardous Materials	4
SHM 485, Safety Management	4
SHM 486, Industrial Operations Safety (3) OR SHM 487, Fundamentals of Industrial Hygiene I (4) OR SHM 484, Environmental Management (4)	3-4

Total Credits 23-24

Safety and Health Management Minor (6910)

Required Courses	Credits
PSY 456, Industrial and Organizational Psychology	4
SHM 386, Occupational Safety and Health ..	3
SHM 387, Accident Investigation	3
SHM 388, System Safety	3
SHM 444, Fundamentals of Hazardous Materials	4
SHM 485, Safety Management	4

SHM 483, Ergonomics (4) OR SHM 486, Industrial Operations Safety (3) OR SHM, 487, Fundamentals of Industrial Hygiene I (4)	3-4
SHM 499, Seminar	1

Total 25-26

Safety and Health Management Courses

SHM 383. Transportation Safety (3). SED 180 recommended prior to enrollment. Transportation systems loss control management. Formerly LCM 383; students may not receive credit for both.

SHM 386. Occupational Safety and Health (3). Occupational safety and health legislation, hazard control management for school and industry personnel. Formerly LCM 386; students may not receive credit for both.

SHM 387. Accident Investigation (3). Prerequisite, SHM 386. Application of the accident investigation process to safety and health management. Formerly LCM 387; students may not receive credit for both.

SHM 388. System Safety (3). SHM 386 recommended prior to enrollment. Systems concepts applied to the management of safety and health programs. Formerly LCM 388; students may not receive credit for both.

SHM 389. Industrial Fire Prevention and Protection (3). Prerequisite, SHM 386. An overview of the fire science field. Characteristics, causes, protection measures, and detection of fire. Alarm systems, codes, standards, building construction, and occupancy limitations for risk assessment. Formerly LCM 389; students may not receive credit for both.

SHM 444. Fundamentals of Hazardous Materials (4). Prerequisite, CHEM 111 or CHEM 112 or by instructor permission. An examination into issues concerning the use of hazardous materials in industry. Chemical and physical properties, including issues related to its transportation.

SHM 483. Ergonomics (4). Prerequisite, SHM 386. Study of human characteristics for the appropriate design of the work environment to promote safety, well being and work efficiency.

SHM 484. Environmental Management (4). Prerequisite, SHM 386. Overview of present and future environmental safety and health issues that impact business and industry.

SHM 485. Safety Management (4). Prerequisite, SHM 386 or permission of instructor. The role of the safety and health professional in the management process. Formerly LCM 485; students may not receive credit for both.

SHM 486. Industrial Operations Safety (3). Prerequisite, SHM 386. Concepts of industrial loss control and an overview of industrial processes. Formerly LCM 486;

students may not receive credit for both.

SHM 487. Fundamentals of Industrial Hygiene I (4). Prerequisite, SHM 386. An overview of the reasons for, benefits of, and activities related to occupational environment control programming and industrial hygiene practice. Formerly LCM 487; students may not receive credit for both.

SHM 488. Fundamentals of Industrial Hygiene II (4). Prerequisite, SHM 487. Measurement procedures to monitor and audit organizational safety and health programs. Procedures to determine incident rates and trends as a basis to determine risks and implementing loss control measures. Inspection and instrumentation practice. Formerly LCM 488; students may not receive credit for both.

SHM 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

SHM 491. Workshop (1-6).

SHM 496. Individual Study (1-6). Prerequisite, permission of instructor.

SHM 498. Special Topics (1-6).

SHM 499. Seminar (1-5). May be repeated.

Traffic Safety Safety Education Minor (6950)

Advisor: Scott Calahan (Summer Only)

Students desiring endorsement for teaching traffic safety education in the public schools are required to take SED 382, 481, 482 and one other course listed in the minor as approved by the Safety Education advisor. For the most comprehensive background with the best opportunity for employment students should plan to take all courses listed in the safety education teaching minor.

Required Courses	Credits
SED 180, Principles of Accident Prevention . . .	3
*SED 382, Driver Task Analysis	3
SHM 383, Transportation Safety.	3
SED 480, Teaching Safety Education: K-12 . . .	3
*SED 481, Teaching Traffic Safety Education: Classroom and Simulation	3
*SED 482, Teaching Traffic Safety Education: In Car	3
SED 484, Safety Program Supervision.	3

Total 21

*Required for state endorsement, plus one additional course approved by the Safety Education advisor for a total of 12 credits (SED 180 or SED 484).

Safety Education Courses

SED 180. Principles of Accident Prevention (3). The underlying principles and theories of accident causation and prevention. Impact of accident on society today, psychological factors related to accidents, legal requirements, accident prevention in business and industry, the schools and community.

SED 298. Special Topics (1-6).

SED 382. Driver Task Analysis (3). Prerequisite, SED 180. Introduction to traffic safety education, the highway transportation system, driver task analysis, classroom instruction techniques.

SED 398. Special Topics (1-6).

SED 480. Teaching Safety Education: K-12 (3). Concepts, methods, techniques and instructional materials of safety education integrated into the school curriculum, kindergarten through high school, including student and teacher rights and responsibilities.

SED 481. Teaching Traffic Safety Education: Classroom and Simulation Instruction (3). Prerequisite, SED 382 or permission of instructor. Methods, materials and techniques for teaching classroom and simulation. Experience in teaching beginning drivers.

SED 482. Teaching Traffic Safety Education: In Car (3). Prerequisite, SED 382 or permission of instructor. Methods, materials and techniques for teaching in dual-control vehicles. Experience teaching beginning drivers.

SED 484. Safety Program Supervision (3). Prerequisite, SED 382 or permission of instructor. Development and management of a total school safety program.

SED 491. Workshop (1-6).

SED 496. Individual Study (1-6). Prerequisite, permission of instructor.

SED 498. Special Topics (1-6).

SED 499. Seminar (1-5). May be repeated.

INFORMATION TECHNOLOGY AND ADMINISTRATIVE MANAGEMENT

Faculty

Chair: Catherine Bertelson
Shaw-Smyser 223
www.cwu.edu/~ITAM

Professors

Catherine Bertelson, Information
Technology, Administrative
Management

V. Wayne Klemin, Information Technology,
Administrative Management, Business
Education

Robert Perkins, Information Technology,
Administrative Management

Connie M. Roberts, Information Technology,
Administrative Management

Associate Professors:

Kimberlee Bartel, Information Technology,
Administrative Management, Business
Education

Lori Braunstein, Information Technology,
Administrative Management

Mary Lochrie, Administrative Management

Robert Lupton, Retail Management and
Technology, Marketing Education

Assistant Professor:

William Chandler, Administrative
Management, Retail Management and
Technology, Fashion Merchandising

Lecturers:

Yvonne Alder, Information Technology,
Administrative Management

Irene Cheyne, Administrative Management

Angela Unruh, Information Technology

General Information

The Information Technology and Administrative Management program leads to a Bachelor of Science degree with specializations in Information Technology, Administrative Management, Retail Management and Technology, Network Administration, Web Administration, or Database Administration. The Fashion Merchandising program leads to a Bachelor of Science degree. The Department provides majors designed to prepare high school business education teachers and marketing education teachers.

Admission Policy for Information Technology and Administrative Management

1. Students must have a cumulative GPA of at least 2.30 for admission to a major.
2. Students must complete the Application for Major form and submit it to the department secretary.
3. Students will be evaluated for their major requirements under the Official Electronic Catalog (OEC) at the time they declare. Requirements for the Basic and Breadth courses are evaluated using OEC at the time of acceptance to CWU.

Students enrolled in any department major must consult with a faculty advisor each quarter. Students desiring vocational (teaching) certification should see their major advisor about additional requirements.

Bachelor of Science Information Technology and Administrative Management Major (4250)

The program is designed to prepare students for information technology, administrative management, or retail management careers. Students completing this major will take the core courses (50-53 credits) and select one of the three areas of specialization: Information Technology, Administrative Management, and Retail Management and Technology.

Several of the elective courses have prerequisites noted in the course description. IT 101, Computer Applications or equivalent, or demonstration of computer competence is a prerequisite to this major. Students must complete at least 60 credits of upper division courses.

Information Technology and Administrative Management Core Requirements	Credits
ACCT 301, Financial Accounting Analysis . . .	5
ADMG 201, Introduction to Business	3
ADMG 271, Business Math Applications	4
ADMG 310, Business Professional Development	3
ADMG 371, Administrative Management	4
ADMG 385, Business Communications and Report Writing	5
ECON 101, Economic Issues or ECON 201/202, Principles of Economics Micro/Macro	5
IT 204, Word Processing Applications	3
IT 248, Web Fundamentals	2
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
IT 288, Business Presentation Applications	2
ADMG/IT/ME 490, Internship	9-12

Core Total 51-54

Administrative Management Specialization (4255)

Administrative Management students become qualified administrative professionals prepared to pursue careers that apply a blend of management, administrative, and information technology skills in contemporary administrative environments. These qualifications are complemented by job-ready business communications and human relations skills. Graduates in the Administrative Management specialization secure careers as entry- and mid-level administrative managers, administrative assistants, legislative assistants, account specialists, and customer service consultants.

Information Technology and Administrative Management Core	51-54
Administrative Management Specialization	24
ADMG 355, Workplace Administration	4
ADMG 372, Leadership and Supervision	4
IT/ADMG 374, Project Management	4
ADMG 485, Managerial Communications	3
HRM 381, Management of Human Resources	5
IT 228, Introduction to Information Technology	4
Department Approved Electives	12-15

Total 90

Information Technology Specialization (4260)

Information Technology students become qualified information technology professionals prepared to pursue careers that apply information systems, web design and publishing, network administration, spreadsheet, and database management, multimedia presentations, and desktop publishing. These qualifications are complemented by job-ready business communications and human relations skills. Graduates in the Information Technology specialization secure careers in information technology such as Web page design and administration, computer sales and support, network administration, and computer training and consulting.

Information Technology and Administrative Management Core	51-44
IT Specialization	
IT 228, Introduction to Information Technology	4
IT 361, Hardware Management	4
IT 452, Telecommunications and Micro-Computer Networks	4
Department Approved Electives	24-27
Select a minimum of one course from this category:	4
IT 374, Project Management (4)	
IT 462, Administrative Systems Analysis and Design (4)	

Select a minimum of one course from this category	4
IT 422, Web Site Construction (4)	
IT 426, Application of Web Languages (4)	
IT 458, Management of Computer Networks (4)	

Select a minimum of one course from this category	3-5
ACCT 455, Accounting Information Systems (5)	
CS 167, Visual Basic Beginning (4)	
CS 367, Visual Basic Advanced (4)	
CS 420, Database Systems (5)	
IT 359, Advanced Spreadsheet Applications (3)	
IT 468, Projects in Database (4)	
IT 470, Database and the Web (4)	
MIS 386, Management Information Systems (5)	
MIS 420, Database Systems in Business (4)	
SOC 464, Applied Data Analysis (3)	

Total 90

Retail Management and Technology Specialization (4265)

Retail Management and Technology students become qualified business professionals prepared to pursue careers in retail environments that apply e-commerce, management, selling, advertising, purchasing, and information technology. These qualifications are complemented by job-ready business communications and human relations skills. Graduates in the Retail Management and Technology specialization secure careers such as store managers, e-retailing, sales associates, and buyers.

Information Technology and Administrative Management Core	51-54
Retail Management and Technology Specialization Requirements	28
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 350, Principles of Advertising	4
ME 467, Retail Management	4
ME 470, Critical Issues in Retailing	4
ME 486, Retailing and E-commerce	4
ME/FCSA 489, Retail Buying	4
Department Approved Electives	8-11
BUS 241, Legal Environment of Business (5)	
HRM 381, Management of Human Resources (5)	
IT 422, Web Site Construction (4)	
IT 470, Database and the Web (4)	
ME 410, Retail Information Technology (4)	
ME 455, Research in Advertising and Retailing (4)	
ME 461, Advertising & Sales Promotion (5)	
ME/FCSA 485, International	

Merchandising (4)	
ME 498, International Comparative Retail Management Study Abroad (10)	
MGT 380, Organizational Management (5)	
MKT 361, Channels of Distribution Management (5)	
MKT 367, Consumer Behavior (5)	
MKT 467, International Marketing (5)	
Total	90

Networking Administration Specialization (4256)

Network Administration students become qualified business professionals prepared to pursue careers that apply a wide variety of network administration skills. These qualifications are complemented by job-ready business communications and human relations skills. Graduates in the Network Administration specialization secure positions as network administrators, network analysts, network managers, data communications analysts, network operations analysts, network specialists, network technicians, PC support specialists, PC network engineers, and user support specialists.

Information Technology and Administrative Management Core	51-54
Network Administrative Courses	36-39
ADMG/IT 374, Project Management	4
IT 228, Introduction to Information Technology	4
IT 361, Hardware Management	4
IT 452, Telecom and Microcomputer Networks	4
IT 457, Network Security	4
IT 458, Management of Computer Networks	4
IT 459, Workstation Administration	4
IT 462, Administrative Systems Analysis and Design	4
Department Approved Electives	4-7
Total	91-100

Web Administration Specialization (4254)

Web administration students become qualified business professionals prepared to pursue careers that apply a wide variety of web administration skills. These qualifications are complemented by job-ready business communications and human relations skills. Graduates in the Web Administration specialization secure positions as Web administrators, Web designers, Web page developers, Web producers, Web site developers, and Web masters. A minor and certification in this area is available.

Information Technology and Administrative Management Core	51-54
Web Administration Courses	36
IT 228, Introduction to Information Technology	4
IT 361, Hardware Management	4
ADMG/IT 374, Project Management	4
IT 422, Web Site Construction	4
IT 424, Managing a Web Site Team	4
IT 426, Web Languages	4
IT 428, Web Applications	4
IT 452, Telecom & Microcomputer Networks	4
IT 470, Database and the Web	4
Department Approved Electives	0-3
Total	90

Database Administration Specialization (4252)

Database Administration students become qualified business professionals prepared to pursue careers that apply to a wide variety of database administration skills. These qualifications are complemented by job-ready business communications and human relation skills. Graduates in the Database Administration specialization secure positions as data administrators, data analysts, data modelers, database developers, and database managers.

Information Technology and Administrative Management Core	51-54
Database Specialization	27
IT 228, Introduction to Information Technology	4
ADMG/IT 374, Project Management	4
IT 452, Telecom and Microcomputer Networks	4
IT 462, Administrative Systems Analysis and Design	4
IT 468, Projects in Database	4
IT 470, Database and the Web	4
ADMG 485, Managerial Communications	3
Department Approved Electives	9-12
Total	90

Administrative Management Minor (1055)

The minor in Administrative Management provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Several of the electives have prerequisites noted in the course description. Administrative Management minors are recommended to take ECON 101, 201 or 202. IT 101, Computer Applications (or equivalent) is a prerequisite to this minor. A student fulfilling the requirements for an ITAM program degree specialization cannot earn a minor within the same program. However, a student may earn a

minor in any other area or departmental certificate.

Required Courses	Credits
ACCT 301, Financial Accounting Analysis	5
ADMG 201, Introduction to Business	3
ADMG 355, Workplace Administration	4
ADMG 371, Administrative Management	4
ADMG 385, Business Communications and Report Writing	5
IT 204, Word Processing Applications	3
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
Department Approved Electives	3

Total 33

Personal Computer Applications Minor (6030)

The Personal Computer Applications minor provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the minor may have prerequisites. IT 101, Computer Applications (or equivalent) is a prerequisite to this minor. A student fulfilling the requirements for an ITAM program degree specialization cannot earn a minor within the same program. However, a student may earn a minor in any other area or departmental certificate.

Required Courses	Credits
IT 204, Word Processing Applications	3
IT 228, Introduction to Information Technology	4
IT 248, Web Fundamentals	2
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
IT 288, Business Presentation Applications	2
IT 359, Advanced Spreadsheet Applications	3
IT 389, Desktop Publishing	3
Department Approved Electives	12

Total 35

Retail Management and Technology Minor (6840)

The minor in Retail Management and Technology provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

The Retail Management and Technology Minor develops competence in retail planning, implementation, and management. IT 101, Computer Applications, (or equivalent) is a prerequisite to the minor. Required and elective courses in the minor may have prerequisites. A student fulfilling the requirements

for an ITAM program degree specialization cannot earn a minor within the same program. However, a student may earn a minor in any other area or departmental certificate.

Required Courses	Credits
ADMG 201, Introduction to Business	3
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 467, Retailing Management	4
ME 468, Retailing and E-Commerce	4
Department Approved lectives	11-13

Total 30-32

Network Administration Minor (4256)

The minor in Network Administration provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the minor may have prerequisites. IT 101, Computer Applications (or equivalent) is a prerequisite to this minor. A student fulfilling the requirements for an ITAM program degree specialization cannot earn a minor with the same program. However, a student may earn a minor in any other area of departmental certificate.

Required Courses	Credits
ADMG 371, Administrative Management ...	4
ADMG 385, Business Communications and Report Writing	5
IT 361, Hardware Management	4
ADMG/IT 374, Project Management	4
IT 452, Telecom. & Microcomputer Networks	4
IT 457, Network Security	4
IT 458, Management of Computer Networks ..	4
OR IT, 459, Workstation Administration	
Department Approved Electives	3

Total 32

Web Administration Minor (4254)

The minor in Web Administration provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the minor may have prerequisites. IT 101, Computer Applications (or equivalent) is a prerequisite to this minor. A student fulfilling the requirements for an ITAM program degree specialization cannot earn a minor within the same program. However, a student may earn a minor in any other area or departmental certificate.

Required Courses	Credits
ADMG 385, Business Communications and Report Writing	5
IT 204, Word Processing Applications	3
IT 248, Web Fundamentals	2
IT 374, Project Management	4
IT 422, Web Site Construction	4
IT 424, Managing a Web Site Team	4
IT 426, Application of Web Languages	4
IT 428, Web Applications	4
Department Approved Electives	6

Total 36

Database Administration Minor (4252)

The minor in Database Administration provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the minor may have prerequisites. IT 101, Computer Applications, (or equivalent) is a prerequisite to this minor. A student fulfilling the requirements for an ITAM program degree specialization cannot earn a minor within the same program. However, a student may earn a minor in any other area or departmental certificate.

Required Courses	Credits
IT 204, Word Processing Applications	3
IT 228, Introduction to Information Technology	4
IT 248, Web Fundamentals	2
IT 268, Database Applications	3
ADMG/IT 374, Project Management	4
IT 468, Projects in Database	4
IT 470, Database and the Web	4
Department Approved Electives	10

Total 34

Advertising Minor (1110)

The minor in advertising provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

The advertising minor develops competence in advertising planning, production, and distribution. It complements a range of majors and is jointly offered by the Departments of Communication and Information Technology and Administrative Management. IT 101, Computer Applications, CS 101, Computer Basics, or demonstration of computer competence is a prerequisite to the minor.

Required Courses	Credits
COM 270, Introduction to Public Relations ..	4
COM 300, Research Methods	4

COM 305, Advertising Copywriting and Placement	4
ME 340, Principles of Selling	4
ME 350, Principles of Advertising	4
ME 461, Advertising and Sales Promotion ...	5
Select one of the following	3-4
COM 306, Introduction to Online Media (4)	
COM 309, Broadcast Advertising and Scriptwriting (4)	
COM 341, Television Field Production (4)	
COM 348, Publication Design (3)	
IT 389, Desktop Publishing (3)	
Select one of the following	4-5
ME 455, Consumer Research (5)	
COM 440, Corporate Television (4)	
COM 475, P.R. & Advertising Agency Management (4)	

Total 32-34

Certificate in Administrative Management – Type B (ADMG)

By Permission Only

The Certificate in Administrative Management provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the certificate may have prerequisites. It is recommended that students take ECON 101, ECON 201, ECON 202, IT 101, Computer Applications (or equivalent) is a prerequisite to this certificate.

Required Courses	Credits
ACCT 301, Financial Accounting	5
ADMG 201, Introduction to Business	3
ADMG 355, Workplace Administration	4
ADMG 371, Administrative Management ...	4
ADMG 385, Business Communication and Report Writing	5
IT 204, Word Processing Applications	3
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
Department Approved Electives	3

Total 33

Certificate in Personal Computer Applications– Type B (PCA)

By Permission Only

The Certificate in Personal Computer Applications provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the certificate may have prerequisites. IT 101,

Computer Applications (or equivalent) is a prerequisite to this certificate.

Required Courses	Credits
IT 204, Word Processing Applications	3
IT 228, Introduction to Information Technology	4
IT 248, Web Fundamentals	2
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
IT 288, Business Presentation Applications	2
IT 359, Advanced Spreadsheet Applications	3
IT 389, Desktop Publishing	3
Department Approved Electives	12
Total	35

Certificate in Retail Management and Technology- Type B (RMT)

By Permission Only

The Certificate in Retail Management and Technology provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

The Retail Management and Technology Certificate develops competence in retail planning, implementation, and management. Required and elective courses in the certificate may have prerequisites. IT 101, Computer Applications, (or equivalent) is a prerequisite to the certificate.

Required Courses	Credits
ADMG 201, Introduction to Business	3
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 467, Retail Management	4
ME 486, Retailing and E-Commerce	4
Department Approved Electives	11-13

Total 30-32

Certificate in Networking Administration - Type B (NET)

By Permission Only

The Certificate in Network Administration provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the certificate may have prerequisites. IT 101, Computer Applications (or equivalent) is a prerequisite to this certificate.

Required Courses	Credits
ADMG 371, Administrative Management	4
ADMG 385, Business Communications and Report Writing	5
IT 361, Hardware Management	4

IT 374, Project Management	4
IT 452, Telecom. and Microcomputer Networks	4
IT 457, Network Security	4
IT 458, Management of Computer Networks OR IT 459, Workstation Administration	4
Department Approved Electives	3
Total	32

Certificate in Web Administration - Type B (WEB)

By Permission Only

The Certificate in Web Administration provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the certificate may have prerequisites. IT 101, Computer Applications (or equivalent) is prerequisite to this certificate.

Required Courses	30 Credits
ADMG 385, Business Communications and Report Writing	5
IT 204, Word Processing Applications	3
IT 248, Web Fundamentals	2
IT 374, Project Management	4
IT 422, Web Site Construction	4
IT 424, Managing a Web Site Team	4
IT 426, Application of Web languages	4
IT 428, Web Applications	4
Department Approved Electives	6

Total 36

Certificate in Database - Type B (DATA)

By Permission Only

The Certificate in Database Administration provides recognition for students who complete the specified certificate courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

Required and elective courses in the certificate may have prerequisites. IT 101, Computer Applications (or equivalent) is a prerequisite to this certificate.

Required Courses	Credits
ADMG/IT 374, Project Management	4
IT 204, Word Processing Applications	3
IT 228, Introduction to Information Technology	4
IT 248, Web Fundamentals	2
IT 268, Database Applications	3
IT 468, Projects in Database	4
IT 470, Database and the Web	4
Department Approved Electives	10

Total 34

Bachelor of Science

Business Education Major (1800)

This major satisfies the endorsement for Business Education.

Completion of the major and the teacher education sequence (52-56 credits) qualifies you for teaching business education at the secondary and middle school levels. State vocational certification requirements should also be satisfied: 2,000 hours of recent, related work experience and completion of OCED 410. See the program advisors.

Students are required to complete EDCS 311 before taking BSED 432. BSED 432 must be completed with a C+ or better to be endorsed to teach keyboarding, accounting, computer applications, and basic business subjects. Keyboarding competence and IT 101, Computer Applications (or equivalent) are prerequisites to this major.

The Business Education program includes coursework, pre-autumn field experience, campus-based practicum, and student teaching.

Required Courses	Credits
ADMG 201, Introduction to Business	3
ADMG 271, Business Math Applications	4
ADMG 355, Workplace Administration	4
ADMG 385, Business Communications and Report Writing	5
ADMG 485, Managerial Communications	3
BSED 432, Methods of Teaching Business and Marketing Education	5
BSED 458, Management of Computer Networks	4
BSED 492, Business Education Practicum	5
BUS 241, Legal Environment of Business	5
ECON 101, Economic Issues OR ECON 201 or 202, Principles of Economics Micro or Macro	5
IT 204, Word Processing Applications	3
IT 228, Introduction to Information Technology	4
IT 248, Web Fundamentals	2
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
IT 288, Business Presentation Applications	2
IT 306, Advanced Word Processing Applications	3
IT 361, Hardware Management	4
IT 359, Advanced Spreadsheet Applications	3
OCED 410, Vocational School to Work Programs	4
Total	74

Business Education Minor (1800)

This minor satisfies the endorsement for Business Education.

Completion of this program and the teacher education sequence (52-56 credits) qualifies you for an additional teaching endorsement in business education at the secondary and middle school levels. This endorsement is necessary to meet vocational certification requirements to be employed by most school districts as a business teacher in the state. Also, state vocational certification requirements should be satisfied: 2,000 hours of recent, related work experience and completion of OCED 410. See the program advisors.

BSED 432 must be completed with a C+ or better to be endorsed to teach keyboarding, accounting, computer applications, and basic business subjects. Keyboarding competence and IT 101, Computer Applications or equivalent are prerequisites to this minor.

The Business Education program includes coursework, pre-autumn field experience, campus-based practicum, and student teaching or an eight-credit teaching practicum.

Required Courses	Credits
ADMG 201, Introduction to Business	3
ADMG 271, Business Math Applications	4
ADMG 355, Workplace Administration	4
ADMG 385, Business Communications and Report Writing	5
BSED 432, Methods of Teaching Business and Marketing Education	5
BSED 458, Management of Computer Networks	4
BSED 492, Business Education Practicum	5
BUS 241, Legal Environment of Business	5
IT 204, Word Processing Applications	3
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
OCED 410, Vocational School to Work Programs	4
Total	48

Bachelor of Science

Marketing Education Major (4975)

This major satisfies the endorsement for Marketing Education.

Completion of this program and the teacher education sequence (52-56 credits) qualifies you for teaching marketing education at the secondary school level. Also, state vocational certification requirements should be satisfied: 2,000 hours of recent, related work experience and completion of OCED 410. See the program advisors.

Students are required to complete EDCS 311 before taking ME 432. ME 432 must be completed with a C+ or better to be endorsed to teach marketing subjects. Keyboarding competence and IT 101, Computer Applications (or equivalent) are prerequisites to this major.

The Marketing Education program includes coursework, pre-autumn field experience, campus-based practicum, and student teaching.

Required Courses	Credits
ADMG 146, Basic Accounting	5
ADMG 201, Introduction to Business	3
ADMG 271, Business Math Applications	4
ADMG 385, Business Communications and Report Writing	5
ECON 101, Economic Issues OR ECON 201 or 202, Principles of Economics Micro or Macro	5
IT 204, Word Processing Applications	3
IT 248, Web Fundamentals	2
IT 258, Spreadsheet Applications	3
IT 268, Database Applications	3
IT 288, Business Presentation Applications	2
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 350, Principles of Advertising	4
ME 432, Methods of Teaching Business and Marketing Education	5
ME 486, Retailing and E-Commerce	4
MKT 360, Principles of Marketing	5
OCED 410, Vocational School to Work Programs	4
Electives	7-11
BUS 241, Legal Environment of Business (5)	
HRM 381, Management of Human Resources (5)	
ME 410, Retail Information Technology (4)	
ME 461, Advertising and Sales Promotion (5)	
ME 467, Retail Management (4)	
ME 470, Critical Issues in Retailing (4)	
ME 485, International Merchandising (4)	
ME 498, International Comparative Retail Management Study Abroad (10)	
MKT 361, Channels of Distribution Management (5)	
MGT 380, Organizational Management (5)	
Total	72-76

Marketing Education Minor (4975)

This minor satisfies the primary endorsement for Marketing Education.

Completion of this program and the teacher education sequence (52-56 credits) qualifies you for teaching marketing education at the secondary school level. Also, state vocational certification requirements should be satisfied: 2,000 hours of recent, related work experience and completion of OCED 410. See the program advisors.

Students are required to complete EDCS 311 before taking ME 432. ME 432 must be completed with a C+ or better to be endorsed to teach marketing subjects. Keyboarding competence and IT 101, Computer Applications (or equivalent) are prerequisites to this major.

The Marketing Education program includes coursework, pre-autumn field experience, and student teaching or an eight-credit teaching practicum.

Required Courses	Credits
ADMG 146, Basic Accounting	5
ADMG 201, Introduction to Business	3
ADMG 385, Business Communications and Report Writing	5
ECON 101, Economic Issues OR ECON 201 or 202 Principles of Economics Micro or Macro	5
ME 330, Principles of Retailing	4
ME 340, Principles of Selling	4
ME 432, Methods of Teaching Business and Marketing Education	5
ME 486, Retailing and E-Commerce	4
MKT 360, Principles of Marketing	5
OCED 410, Vocational School to Work Programs	4
Marketing Minor Electives:	
ITAM Department Approved Electives	7
Total	51

Administrative Management Courses

ADMG 146. Basic Accounting (5). For office workers who are required to keep a simple set of books and complete various government reports. May not be taken for college credit if any other college accounting course or courses have been completed. May be audited.

ADMG 201. Introduction to Business (3). Functions, practices, and organization of the business enterprise.

ADMG 271. Business Math Applications (4). Business and merchandising mathematics applications.

ADMG 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ADMG 298. Special Topics (1-6).

ADMG 299. Seminar (1-5). May be repeated.

ADMG 310. Business Professional Development (3). Prerequisite, junior standing. Develops strategies to enhance career success through professional image, attitudes, and ethics.

ADMG 355. Workplace Administration (4). Knowledge and skills necessary for working efficiently and effectively in today's workplace. Course topics include basic business communications, meeting and conference management, office equipment, office health and safety, records management, and scheduling. Formerly ADMG 255. Students may not receive credit for both.

ADMG 371. Administrative Management (4). Administrative management techniques and practices.

ADMG 372. Leadership and Supervision (4). Supervision and leadership techniques to improve productivity in administrative settings.

ADMG 374. Project Management (4). Development of project management skills

and their application in workplace environments. ADMG 374 and IT 374 are equivalent courses. Students may not receive credit for both.

ADMG 375. Personal Finance via the Internet (4). Prerequisite, access to course Web site, and e-mail. Buymanship, choice making, money management, insurance, investments, shelter, personal legal aspects, and taxes.

ADMG 385. Business Communications and Report Writing (5). Prerequisite, ENG 102 or equivalent and junior standing. Planning and writing skills for business letters, memoranda, employment, and reports.

ADMG 386. Records Management (3). Prerequisite, ADMG 355 and junior standing. Prerequisite or corequisite, IT 368. Manual and electronic records systems selection and control, business forms design, and records facilities planning.

ADMG 398. Special Topics (1-6).

ADMG 485. Managerial Communications (3). Prerequisite, ADMG 385. Advanced written oral, and non-verbal business communications including proposals, crisis management, international communication, international/domestic etiquette, meeting management, conflict resolution, negotiation, and collaboration.

ADMG 490. Cooperative Education (5-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Summers only.

ADMG 491. Workshop (1-6).

ADMG 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. Grade will be S/U. ADMG/ME/IT/BSED 493A are equivalent courses. May be repeated for a total of 3 credits.

ADMG 493B. Undergraduate Assistant Practicum (1-3). Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with specific learning agreements required. Department requirements must be met. Grade will be S/U. ADMG/ME/IT/BSED 493B are equivalent courses. May be repeated for a total of 3 credits.

ADMG 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ADMG 498. Special Topics (1-6).

ADMG 499. Seminar (1-5).

Business Education Courses

BSED 101. Computer Keyboarding (2). Introduction to touch keyboarding and word processing for beginners. May not be taken for credit by students with one semester or more of high school keyboarding (typewriting), but can be audited. Formerly BSED 151. Students may not receive credit for both.

BSED 102. Computer Keyboarding Skill Building (2). Prerequisite, BSED 101 or equivalent touch keyboarding skill. Development of touch keyboarding stroking speed and accuracy skill. May be repeated for a total of four credits. Grade will be S or U. Formerly BSED 152. Students may not receive credit for both.

BSED 296. Individual Study (1-6). May be repeated. Prerequisite, permission of instructor.

BSED 298. Special Topics (1-6).

BSED 299. Seminar (1-5). May be repeated.

BSED 316. Education Technology (3). Prerequisite, admission to the Teacher Preparation Program, EDF 301 or EDCS 300.1, PSY 314, and demonstration of computer competence or IT 101 or CS 101 or equivalent. Contemporary classroom media and computer technology including hypertext, classroom management, and discipline-specific software. BSED 316 and EDCS 316 are equivalent courses. Students may not receive credit for both.

BSED 392. Microcomputer Lab Practicum (2). Prerequisite, IT 101 or equivalent or demonstration of computer competence and permission of Department Chair. Assist students during microcomputer classes and open labs. Troubleshooting software and equipment problems. Develop basic Windows competencies. May be repeated for a total of four credits. Grade will be S or U.

BSED 398. Special Topics (1-6).

BSED 429. Teaching Keyboarding in the Elementary Classroom (1). Prerequisite, basic competency in keyboarding or typewriting. Methods and materials for teaching keyboarding on microcomputers.

BSED 432. Methods of Teaching Business and Marketing Education (5). Prerequisite, a majority of the business or marketing major completed and EDCS 311. BSED 432 and ME 432 are equivalent courses. Students may not receive credit for both.

BSED 445. Techniques of Cooperative Education (3). Philosophy, place, methods and techniques of coordinating work experience. BSED 445 and ME 445 are equivalent courses. Students may not receive credit for both.

BSED 458. Management of Computer Networks (4). Prerequisite: basic level of understanding of computer networks. Develop and improve network adminis-

tration and management skills within the Server environment. BSED 458 and IT 458 are equivalent courses. Students may not receive credit for both.

BSED 488. Multimedia Presentations (3). Prerequisite, IT 101 or equivalent or demonstration of computer competence. Plan, design, and produce clear, complete, accurate, and attractive linear and non-linear multimedia presentations using common multimedia hardware and software. BSED 488 and IT 488 are equivalent courses. Students may not receive credit for both.

BSED 490. Cooperative Education (5-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Summers only.

BSED 491. Workshop (1-6).

BSED 492. Practicum (5-15). Prerequisite, permission of Department Chair. Grading will be S or U. BSED 492 and ME 492 are equivalent courses. Students may not receive credit for both.

BSED 493A. Undergraduate Research Practicum (1-3). Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. Grade will be S/U. BSED/ME/IT/ADMG 493A are equivalent courses. May be repeated for a total of 3 credits.

BSED 493B. Undergraduate Assistant Practicum (1-3). Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with specific learning agreements required. Department requirements must be met. Grade will be S/U. BSED/ME/IT/ADMG 493B are equivalent courses. May be repeated for a total of 3 credits.

BSED 496. Individual Study (1-6). May be repeated. Prerequisite, permission of instructor.

BSED 498. Special Topics (1-6).

BSED 499. Seminar (1-5). May be repeated.

Information Technology Courses

Formerly ADMG. Students may not receive credit for both.

IT 101. Computer Applications (3). Basic skills in Windows, word processing, spreadsheets, databases, and presentations. Formerly ADMG 101.

IT 204. Word Processing Applications (3). Prerequisite, touch keyboarding competency of at least 25 words per minute. Developing microcomputer word processing skills for

- producing business-related letters, tables, and reports. Formerly ADMG 204.
- IT 228. Introduction to Information Technology (4).** Exploring information technology principles, practices, and applications in contemporary society.
- IT 248. Web Fundamentals (2).** Prerequisite, IT 101 or equivalent. Development of web pages, electronic mail skills, and Internet skills for business, education and training environments.
- IT 258. Spreadsheet Applications (3).** Prerequisite, IT 101, CS 101, or demonstration of computer competence. Basic spreadsheets for business applications; design of spreadsheets; formulas and functions; formatting, and presentation. Formerly IT and ADMG 358. Students may not receive credit for both.
- IT 268. Database Applications (3).** Prerequisite, IT 101, CS 101, or demonstration of computer competence. Develop basic database skills in a personal database application for workplace environments. Formerly IT and ADMG 368. Students may not receive credit for both.
- IT 288. Business Presentation Applications (2).** Prerequisite, IT 101 or equivalent. Develop multimedia graphic presentations for business and workplace environments. Formerly IT and ADMG 388. Students may not receive credit for both.
- IT 306. Advanced Word Processing Applications (3).** Prerequisite, IT 204 or equivalent and touch keyboarding competence of at least 50 words per minute. Microcomputer advanced word processing skills for producing business related documents. Formerly ADMG 306.
- IT 359. Advanced Spreadsheet Applications (3).** Prerequisite: IT 258. Advanced spreadsheets for business applications; design of multiple sheet workbooks and templates; advanced functions and formulas; enhanced formats; lists and pivot tables; and using "what-if" analysis tools such as Goal Seek and Solver. Formerly ADMG 359.
- IT 361. Hardware Management (4).** Prerequisite, IT 228. Theory and skill development related to hardware configuration, components, and maintenance.
- IT 374. Project Management (4).** Development of project management skills and their application in workplace environments. IT 374 and ADMG 374 are equivalent courses. Students may not receive credit for both.
- IT 389. Desktop Publishing (3).** Prerequisite, IT 101 or equivalent or demonstration of computer competence. Analyzing and designing layout, typography, and graphics to produce newsletters, advertisements, brochures, and flyers. Formerly ADMG 389.
- IT 422. Web Site Construction (4).** Prerequisite, IT 248. Design and implementation of the information technology infrastructure needed to operate a business Web site.
- IT 424. Managing a Web Site Team (4).** Prerequisite, IT 422. Web site team management including planning, implementation, operation, quality assurance, and legal issue.
- IT 426. Application of Web Languages (4).** Prerequisite, IT 422. Web languages for the non-computer science student.
- IT 428. Web Applications (4).** Prerequisite, IT 422. Web design using Web applications software such as Dreamweaver, Fireworks, and Flash or equivalent; digital hardware, graphic design, and page layout.
- IT 452. Telecommunications and Micro-computer Network Applications (4).** Prerequisite, IT 228 or permission of instructor. Personal Computer networks communications including: Networking Basics; LAN Topologies, LAN Protocols; and Network Operating Systems; and telecommunications, including voice, data, message, and image communications. Formerly ADMG 452.
- IT 457. Network Security (4).** Prerequisite, IT 228. Analysis and design of computer network security in business environment.
- IT 458. Management of Computer Networks (4).** Prerequisite, basic level of understanding of computer networks. Develop and improve network administration and management skills within the Server environment. IT 458 and BSED 458 are equivalent courses. Students may not receive credit for both.
- IT 458. Management of Computer Networks (4).** Prerequisite: basic level of understanding of computer networks. Develop and improve network administration and management skills within the Server environment. IT 458 and BSED 458 are equivalent courses. Students may not receive credit for both.
- IT 459. Workstation Administration (4).** Prerequisite, IT 228. Implementation, administration, and troubleshooting workstations as a desktop operating system in any network environment.
- IT 462. Administrative Systems Analysis and Design (4).** Prerequisite IT 361. Analyze office information systems through selected analysis tools and procedures. Students will apply this knowledge by designing improved systems..
- IT 468. Projects in Database (4).** Prerequisites, IT 268 and IT 462. Advanced techniques in database design, event-driven and object-driven programming, VBA statements and modules, debugging, creating Index files, and security issues.
- IT 470. Database and the Web (4).** Prerequisites, IT 228 and IT 268. Creating dynamic web pages that interact with a database.
- IT 488. Multimedia Presentations (3).** Prerequisite, IT 101 or equivalent or demonstration of computer competence. Plan, design, and produce clear, complete, accurate, and attractive linear and non-linear multimedia presentations using common multimedia hardware and software. IT 488 and BSED 488 are equivalent courses. Students may not receive credit for both. Formerly ADMG 488.
- IT 489. Web Page Construction (3).** Design, development, and publishing Internet Web pages including web page evaluation.
- IT 490. Cooperative Education (5-12).** Ad individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- IT 491. Workshop (1-6).** May be repeated.
- IT 493A. Undergraduate Research Practicum (1-3).** Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. Grade will be S/U. IT/ME/ADMG/BSED 493A are equivalent courses. May be repeated for a total of 3 credits.
- IT 493B Undergraduate Assistant Practicum (1-3).** Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with specific learning agreements required. Department requirements must be met. Grade will be S/U. IT/ME/ADMG/BSED 493B are equivalent courses. May be repeated for a total of 3 credits.
- IT 496. Individual Study (1-6).** Prerequisite, permission of the instructor. May be repeated.

Marketing Education Courses

- ME 251. Visual Merchandising (3).** Prerequisite FCSH 166, ADMG 201. Organization, planning, preparation, and arrangement of effective visual merchandise sales presentation. One hour lecture and four hours lab per week. ME 251 and FCSA 251 are equivalent courses. Students may not receive credit for both.
- ME 296. Individual Study (1-6).** May be repeated. Prerequisite, permission of instructor.
- ME 301. Principles of Fashion Merchandising (4).** The development of the fashion industry; historical, economic and technological influences; apparel manufacturing, product development, fashion styles and markets. Formerly ME/FCSA 180. ME 301 and FCSA 301 are equivalent courses. Students may not receive credit for both.
- ME 330. Principles of Retailing (4).** An introduction to the field of retailing including retail stores, merchandising, operations, store location and layout, internal organization, buying, personnel management, inventory control, and sales promotion.

- ME 340. Principles of Selling (4).** The field of selling, its role in the economy, the sales process, types of selling, planning the sale and the sales organization.
- ME 350. Principles of Advertising (4).** An introduction to the field of advertising and its fit into society including integrated marketing communication, consumer behavior, segmentation and target marketing, application of advertising research, creative and media strategy, copy, layout, production, budgeting, agency organization, and international and local advertising.
- ME 355. Advertising Media Planning (4).** A study of the role of media in marketing related advertising decisions with emphasis on media research, technology, market analysis, market strategy, psychodynamics of media, reach and frequency, budgeting, and buying.
- ME 379. Internship Planning (1-5).** ME 379 and FCSA 379 are equivalent courses. Formerly ME 399.1. Students may not receive credit for both.
- ME 394. Student Leadership Development (1).** Students will gain skills in teamwork, promotion, leadership, service, public speaking and compete in marketing related competitive events at the state and international level.
- ME 410. Retail Information Technology (4).** Prerequisite, ME 330 and senior standing. Use of contemporary technology in collecting, analyzing, and interpreting retail management data and writing and presenting retail management reports.
- ME 432. Methods of Teaching Business and Marketing Education (5).** Prerequisite, a majority of the business or marketing major completed and EDCS 311. ME 432 and BSED 432 are equivalent courses. Students may not receive credit for both.
- ME 445. Techniques of Cooperative Education (3).** Philosophy, place, methods, and techniques of coordinating work experience. ME 445 and BSED 445 are equivalent courses. Students may not receive credit for both.
- ME 455. Research in Advertising and Retailing (4).** Prerequisites, ME 330 or ME 350. Primary and secondary data collection, compilation, analysis, interpretation, and reporting in advertising and retailing.
- ME 461. Advertising and Sales Promotion (5).** Prerequisite, senior standing, IT 389 and ME 350. This capstone course provides the student with the opportunity to apply all that they have learned in their major and in other fields by the development of a comprehensive advertising campaign. The focus of the course is to apply learned theory-base to practice application.
- ME 467. Retail Management (4).** Prerequisites, ME 330, Senior standing. Retail store

ownership and management, including startup, location, market analysis, customer service, organization, merchandise management, human resource management, sales promotion, and financial planning. Formerly ME 367. Student may not receive credit for both.

- ME 470. Critical Issues in Retailing (4).** Prerequisites, ME 330 and senior standing. Capstone course in retailing that focuses on current retail management and technology literature and case studies.
- ME 479. Fashion Merchandising Seminar (3).** Prerequisites, ME 467 and ME 461. Same as FCSA 479. Students may not receive credit for both.
- ME 485. International Merchandising (4).** Prerequisite, ME 330. Emphasis on international retailing and global trade. Focus on cross-cultural differences, work environments, policies and regulations. ME 485 and FCSA 485 are equivalent courses. Students may not receive credit for both.
- ME 486. Retailing and Electronic Commerce (4).** Prerequisite/corequisite, ME 330 and access to the Internet. Examines the progress and potential of the WWW for the marketing, selling, promoting, and distributing of retail goods and services.
- ME 489. Retail Buying (4).** Prerequisites ME 330. Principles of buying and selling merchandise; analysis of consumer demand, stock inventories and open-to-buy. ME 489 and FCSA 489 are equivalent courses. Students may not receive credit for both.
- ME 490. Cooperative Education (5-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. **Fashion Merchandising Internship:** prerequisite, FCSA/ME 379. Available summer only - 10 credit minimum. Same as FCSG 490. Students may not receive credit for both.
- ME 492. Practicum (5-15).** Prerequisite, permission of Department Chair. Grading will be S or U. ME 492 and BSED 492 are equivalent courses. Students may not receive credit for both.
- ME 493A. Undergraduate Research Practicum (1-3).** Conduct research under direct supervision of a professor with specific learning agreement required. Department requirements must be met. Grade will be S/U. ME/IT/ADMG/BSED 493A are equivalent courses. May be repeated for a total of 3 credits.
- ME 493B. Undergraduate Assistant Practicum (1-3).** Assist in monitoring, supervising, supporting, and tutoring instruction under direct supervision of a professor with

specific learning agreements required. Department requirements must be met. Grade will be S/U. ME/IT/ADMG/BSED 493B are equivalent courses. May be repeated for a total of 3 credits.

- ME 496. Individual Study (1-6).** May be repeated. Prerequisite, permission of instructor.
- ME 498. Special Topics (1-6).**
- ME 499. Seminar (1-5).** May be repeated.

ITAM Programs and Courses on Reserve

BSED 420. Teaching Accounting (3); BSED 425. Teaching Keyboarding and Computer Applications (3); BSED 426. Teaching Basic Business Subjects (3); IT 352. Windows and File Management (2); IT 369. Advanced Database Applications (2); IT 386. Records Management; IT 461. Administrative Systems Analysis (5); ME 331. Teaching Marketing Education (3).

INTERNATIONAL STUDIES AND PROGRAMS

Interim Executive Director: Michael Launius
International Center

General Program Information

The Office of International Studies and Programs (OISP) coordinates all internationally related activities on campus. This includes maintaining institutional linkages, facilitating faculty exchanges, providing study abroad/exchange and academic advising for both international students and American students, promoting English language acquisition through the Asia University America Program and the University English as a Second Language Program, and collaborating with the academic Deans and departments in support of the overall internationalization of the university curriculum.

OISP provides a variety of services to all segments of Central Washington University in order to meet the diverse needs of CWU's students, faculty, international students, research scholars and professors. The following services are offered through the OISP: study abroad/exchange advising (SA/EA), advising to international students (AIS), English language training through the University English as a Second Language (UESL) program, and a unique English language and cultural learning experience for Japanese students from Asia University in Japan through the Asia University America Program (AUAP).

Institutional Linkages

Central Washington University and the Office of International Studies and Programs (OISP) maintain active inter-institutional and organizational relationships with the following universities: Anhui University, China; Gunma Prefectural Women's University, Japan; Herzen State Pedagogical University, Russia; University of Pecs, Hungary; International Student Exchange Program, various countries; Mexico; Kyoto University of Foreign Studies, Japan; Northern Jiaotong University, China; Queensland University of Technology, Australia; Charles Darwin University, Australia; Griffith University, Australia; Macquarie University, Australia; University of Shimane, Japan; Shimane Women's Junior College, Japan; Shimane International College, Japan; Takushoku University, Japan; Universidad de Guadalajara, Mexico; University of Hull, United Kingdom; Universidad Austral de Chile, Chile; Pukyong National University, Korea; AHA International, various countries; Universidad de La Coruna, Spain; Beijing University, China; Universidad Anahuac del Sur, Mexico; Universite de Pau et des Pays de l'Adour, France; College Consortium for International Studies, various countries; American Institute for Foreign Studies, various countries; Centro de Investigaciones en Medio Ambiente y Salud (CIMAS), Ecuador; University of Washington Cadiz Program, Spain; Universidad Autonoma de Guadalajara, Mexico; Asia University, Japan; and Napier University, Scotland. Active student and faculty exchange opportunities exist between CWU and these institutions.

INTERNATIONAL AND AREA STUDIES

CWU offers Chinese, French, German, Japanese, Russian and Spanish language courses. Students studying a language are encouraged to have international experience in order to learn more about the cultural context of the language. Regular degree programs are offered in Foreign Languages with specializations in Chinese, French, German, Japanese, Russian and Spanish. The Foreign Language Broad Area major may include studying abroad in a country where the target language is taken.

Students can internationalize their undergraduate education by completing a major or minor in Asia/Pacific Studies and/or Latin American Studies. These programs of study are interdisciplinary and incorporate courses in anthropology, art, economics, geography, history, languages, philosophy, and political science. Other area-focused courses are also available throughout the academic year.

STUDY ABROAD AND EXCHANGE PROGRAMS

**Program Director: Heather Barclay Hamir
International Center**

Study abroad and exchange program advising is available to all students who are interested in studying on a national or international program during their studies at CWU. There are more than two dozen international programs that offer study in over 40 countries including Japan, England, Australia, Ireland, Spain, France, Germany, Mexico, Hungary, Russia and China. Students can study abroad for as briefly as one month or as long as one year. Programs are available all quarters, including summer, and program fees are similar to, and, in some cases, lower than fees for studying at CWU. The International Center has a library of resources that includes international opportunities for study, scholarships, travel, volunteer work, internships and careers.

Through the National Student Exchange (NSE) program, students can study for a semester or a year at one of CWU's colleague institutions within the United States. CWU has national exchange with more than 100 universities in 48 states and U.S. territories. NSE also provides students with the opportunity to study at many predominantly minority institutions within the United States. Exchange participants have the option of paying the in-state tuition of either the host institution or CWU. Students interested in any study abroad, exchange, or international internship opportunity should visit the International Center.

ADVISING TO INTERNATIONAL STUDENTS AND SCHOLARS

International students and scholars receive academic advising, advocacy, and immigration regulations and procedures assistance through the Office of International Studies and Programs. Support services are available to all international students including those here for language training in the UESL Department, to take part in an academic year exchange, or to obtain a Bachelor's or Master's degree.

UNIVERSITY ENGLISH AS A SECOND LANGUAGE PROGRAM

**Program Director: Steve Horowitz
International Center**

Lecturers

Matt Britschgi
Randi Freeman
Meiqi He
Beiying Hu
Carl Rosser

The University English as a Second Language Program consists of a year-round intensive English program and short-term special programs. The year-round intensive program provides English language instruction (20 hours a week), orientation to American culture, and academic preparation for international students from around the world. Students can enter the program four times a year and progress through the 5-level program at their own rate. Content courses and elective courses, including TOEFL Preparation, are offered in addition to work in the core skill areas (reading, writing, integrated grammar, listening comprehension, and speaking). Educational field trips, social activities, and outside-of-class communication opportunities with native speakers of English serve to enhance the learning experience. In addition, conditional admission to undergraduate study at CWU is an option through the UESL Program.

Short-term special programs are arranged for specific groups from schools, companies and organizations. Students from many of CWU's sister institutions come to campus each year for such programs.

The Program provides practical training in Teaching English as a Second Language for education majors as well as English Department graduate students. American students can volunteer to be a Conversation Partner with a UESL student.

ASIA UNIVERSITY AMERICA PROGRAM

**Program Director: Cynthia A. Green
International Center**

Lecturers

Pedro Bicchieri
Kent DaVault
James Hartshorn
Stephanie Johnson

The Asia University America Program (AUAP) is a study abroad program for sophomores from Asia University in Tokyo, Japan. Two groups of students come to CWU each year and stay for five months. A group of approximately 85 students arrives at the beginning of March and stays until the end of

July, and a group of approximately 100 students arrives at the beginning of fall quarter and stays through mid-February. The program is presently ongoing at two other universities in the northwest: Western Washington University and Eastern Washington University.

The purpose of the AUAP is to provide students from Asia University the opportunity to improve their English skills, learn about American culture and experience university life in the US. Students attend 18 hours of AUAP classes per week following the required curriculum from Asia University which includes; Functions of English, Integrated English Skills, and American Studies. The classes are taught by AUAP instructors following a curriculum set up by Asia University. The students earn one semester of Asia University credit during their studies at CWU.

CWU students are employed in the AUAP as International Peer Advisors and also as teaching assistants in the classes. Many CWU students volunteer to participate in the Campus Friends program in which AUAP students are matched with CWU students for conversation and activities.

LATIN AMERICAN STUDIES PROGRAM

Interim Program Directors:

Michael Ervin, History
Anthony Abbott, Geography and Land Studies

General Program Information

The minor is designed to provide a broad, interdisciplinary base of studies on Latin America which will supplement the academic major for those students who intend to teach as well as those who plan to seek employment in government or private enterprise. Students minoring in Latin American studies can do so under one of the following options or a preapproved combination of both.

Latin American Studies Minor I (4610)

Prerequisite: Spanish language proficiency equivalent to the end of second year level (253).

Required Courses	Credits
LAS 102, Multi-disciplinary Introduction to Latin American Studies	5
Two academic quarters enrolled in one of CWU exchange programs with a Latin American university taking preapproved courses related to Latin American Studies in at least three different disciplines	25

Total 30

Latin American Studies Minor II (4615)

(on-campus)

Prerequisite: Spanish language proficiency equivalent to the end of second year level (253).

Required Courses	Credits
LAS 102, Multi-disciplinary Introduction to Latin American Studies	5
Department Approved LAS electives	25
Select courses with emphasis on Latin America. Courses not requiring Spanish or Portuguese proficiency may be taken prior to completion of the language prerequisite with approval. Elective credits must be from at least three different disciplines.	

Total 30

Latin American Studies Courses

LAS 102. Introduction to Latin American Studies (5). A multi-disciplinary introduction of Latin American Studies, presented in three main components: "People and the Land", "The Environment and the Human Condition", and "Socio-Political Spectrum".

LAS 398. Special Topics (1-6).

LAS 399. Multi-disciplinary Seminar on Latin America (5).

LAS 496. Individual Study (1-6).

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: LAS 360 Survey of Modern Mexico (taught in Mexico only) (5), and LAS 460 Comparative Cultures-Mexico (taught in Mexico only) (5).

LAW AND JUSTICE

Web Site

<http://www.cwu.edu/~lajhome/>

Faculty

Interim Chair: Phil Tolin
Psychology Building 463

Professors:

J. Michael Olivero, Ph.D., M.S.W., Corrections, Criminology, Research Methods, Criminal Justice
Charles Reasons, LL.B., Ph.D., Criminology, Criminal Justice, and Pre-Law

Associate Professor:

James B. Roberts, J.D., M.S.W., Legal Research, Correctional Law, Correctional Counseling, Paralegal Studies and Criminal Justice

Assistant Professor:

Rodrigo Murataya, M.P.A., Police Personnel Administration, Administration of Justice, Criminal Investigation, Intro to Criminal Law, Police Community Relations, Research Methods (Director, CWU - Yakima)

Mary Ellen Reimund, M.A., J.D., LL.M., Criminal Law, Criminal Justice, Alternative Dispute Resolution (Director, CWU - SeaTac)

Key Sun, LL.B., M.A., M.S.W., Ph.D., Methodology, Correctional Counseling, Criminal Justice, Psychology (Director, CWU - Steilacoom)

Lecturer

Yvonne Chapman, M.A., J.D., Pre Law (Director, CWU - Lynnwood)

General Departmental Information

The Law and Justice curriculum is designed to give students a foundation in law and justice, and a broadly based education in the liberal arts tradition, not a police or corrections training experience. This major primarily focuses on the disciplines of criminal justice and legal studies, as well as political science, psychology, and sociology. The core courses are designed to provide an infrastructure in law and justice. Approved elective courses provide opportunity for the students to develop a broad perspective on social and legal issues.

Standards for Admission to the Law and Justice Major

1. Admission into the LAJ major will be based upon overall grade point average (GPA) of 2.25. Students should also submit a one-page statement explaining their reasons for applying for a LAJ degree.
2. The Department Chair may admit a limited number of students with GPAs under 2.25.
3. Students applying to the LAJ major must submit a major application form.
4. The Department of Law and Justice reserves the right to modify these requirements in special cases or as the needs of the Department change.

Department Standing: A minimum grade of C- (1.7) must be earned in each course used to fulfill major requirements.

Bachelor of Arts Law and Justice Major (4650)

Law and Justice Core Requirements	Credits
LAJ 300, Administration in Criminal Justice	4
LAJ 302, Evidence and Arrest	4
LAJ 303, Legal Research	4
LAJ 400, Research Methods in	

Criminal Justice.....	4
LAJ 401, Ethics, Diversity and Conflict in Criminal Justice.....	4
LAJ 459, Current Issues.....	4

Law and Justice Core Total 24

Students may obtain a degree without a specialization or select a specialization based upon interest and future plans. Each specialization — Paralegal/Prelaw, Corrections and Law Enforcement — has a core group of courses which must be taken.

LAJ Degree, Generalist (4645)

LAJ Core Requirements.....	24
Classes selected from requirements of any of the specializations.....	28
Select 8 credits from the list of approved electives.....	8
Total	60

Prelaw/Paralegal Specialization (4653)

Required Courses	Credits
LAJ Core Requirements.....	24
LAJ 311, Family Law.....	4
LAJ 313, Introduction to Criminal Law.....	4
LAJ 316, Introduction to Paralegal Studies.....	4
LAJ 317, Introduction to Civil Practice.....	4
LAJ 410, Legal Writing.....	4
Select 16 credits from the list of approved electives:*	16
Total	60

Corrections Specialization (4651)

Required Courses	Credits
LAJ Core Requirements.....	24
LAJ 324, Correctional Law.....	4
LAJ 326, Correctional Counseling.....	4
LAJ 327, Community Corrections.....	4
LAJ 450, Report Writing.....	4
LAJ 451, Crime in America.....	4
Select 16 credits from the list of approved electives:*	16
Total	60

Law Enforcement Specialization (4652)

Required Courses	Credits
LAJ Core Requirements.....	24
LAJ 333, Police Personnel Administration.....	4
LAJ 313, Introduction to Criminal Law.....	4
LAJ 332, Police-Community Relations.....	4
LAJ 450, Report Writing.....	4

LAJ 451, Crime in America.....	4
Select 16 credits from the list of approved electives:*	16
Total	60

*See Department for a complete listing of approved electives.

Law Enforcement Minor (4652)

Required Courses	Credits
LAJ 300, Administration of Criminal Justice.....	4
LAJ 313, Introduction to Criminal Law.....	4
LAJ 332, Police Community Relations.....	4
LAJ 333, Police Personnel Administration.....	4
LAJ 450, Report Writing.....	4
LAJ 451, Crime in America.....	4
Total	24

Corrections Minor (4651)

Required Courses	Credits
LAJ 300, Administration of Criminal Justice.....	4
LAJ 324, Correctional Law.....	4
LAJ 326, Correctional Counseling.....	4
LAJ 327, Community Corrections.....	4
LAJ 450, Report Writing.....	4
LAJ 451, Crime in America.....	4
Total	24

Pre-Law/Paralegal Minor (4653)

Required Courses	Credits
LAJ 300, Administration of Criminal Justice.....	4
LAJ 311, Family Law.....	4
LAJ 313, Introduction to Criminal Law.....	4
LAJ 316, Introduction to Paralegal Studies.....	4
LAJ 317, Introduction to Civil Practice.....	4
LAJ 410, Legal Writing.....	4
Total	24

Law and Justice Courses

LAJ 101. Introduction to Law and Justice (4). A basic overview of the nature and sources of law and the application of law to our everyday life.

LAJ 300. Administration of Criminal Justice (4). The sources of police power and authority in a democratic society, the internal organization and administration of federal, state and local agencies, their interaction with each other and with the communities they serve. Formerly LAJ 347. Students may not receive credit for both.

LAJ 302. Evidence and Arrest (4). Prerequisite LAJ 300 or permission of instructor. A review of guidelines for police arrest, search, interrogation and identification procedures based upon rules of criminal procedure derived from the U.S. Constitution. Formerly

LAJ 245 and LAJ 320. Students may not receive credit for both.

LAJ 303. Legal Research (4). Prerequisite LAJ 300 or permission of instructor. Techniques of legal research; the case system, statutes, court decisions, Shepardizing. Formerly LAJ 250 and LAJ 314. Students may not receive credit for both.

LAJ 311. Family Law (4). Prerequisite for LAJ majors only: LAJ 300 or permission of instructor. Marriage, divorce, state regulation, custody, and care and supervision of children. Formerly LAJ 348. Students may not receive credit for both.

LAJ 313. Introduction to Criminal Law (4). Prerequisite LAJ 300 or permission of instructor. Scope and nature of law; classification of offenses; act and intent; capacity to commit crime and defenses. Elements of major criminal statutes. Formerly LAJ 255. Students may not receive credit for both.

LAJ 316. Introduction to Paralegal Studies (4). Prerequisite LAJ 300 or permission of instructor. This course provides an introduction to paralegal studies. It provides analysis of the role of paralegal and the tasks involved in being a paralegal including interviewing clients and witnesses, legal research, writing and legal writing and attending trials.

LAJ 317. Introduction to Civil Practice (4). Prerequisite LAJ 300 or permission of instructor. This course is designed to provide students with a comprehensive overview of civil litigation from investigation through discovery, trial and appeal.

LAJ 324. Correctional Law (4). Prerequisite LAJ 300 or permission of instructor. This course examines transitions in prisoner civil rights since the U.S. Supreme Court ruled that inmates hold all rights as other citizens with the exception of those necessarily taken by fact of incarceration. Constitutional issues will be analyzed, including standards for shelter and medical care, discipline, religion and access to the courts. Formerly LAJ 312. Students may not receive credit for both.

LAJ 326. Correctional Counseling (4). Prerequisite LAJ 300 or permission of instructor. This course provides an analysis of the role of correctional counselor in rehabilitative efforts with offenders. Course focuses include criminal offender treatment methods and correctional or rehabilitative policy. Formerly LAJ 315. Students may not receive credit for both.

LAJ 327. Community Corrections (4). Prerequisite LAJ 300 or permission of instructor. Maintaining, supervising and counseling offenders in the community based setting. Formerly LAJ 330. Students may not receive credit for both.

LAJ 331. Investigation (4). Prerequisite LAJ 300 or permission of instructor. Function and propriety of investigations; methods of

- gathering evidence. Formerly LAJ 247 and LAJ 321. Students may not receive credit for both.
- LAJ 332. Police Community Relations (4).** Prerequisite LAJ 300 or permission of instructor. This course examines the relationship between the police and community, and how to make this relationship a positive one. Analysis will be made of the history of police and friction with various groups in society. Attempts at positive police communication and community participation will also be examined. Formerly LAJ 322. Students may not receive credit for both.
- LAJ 333. Police Personnel Administration (4).** Prerequisite LAJ 300 or permission of instructor. History and philosophy of federal, state and local police personnel programs; overview of personnel functions. Formerly LAJ 256 and LAJ 301. Students may not receive credit for both.
- LAJ 334. Issues in Policing (4).** Prerequisite LAJ 300 or permission of instructor. This course provides a comprehensive examination of the current critical issues and policy dilemmas within the American criminal justice system. Formerly LAJ 323. Students may not receive credit for both.
- LAJ 342. Juvenile Justice Process (4).** Prerequisite LAJ 300 or permission of instructor. Includes historical, ideological development of juvenile justice process; analyses policies, mechanisms; examines integrated network of agencies; examines juvenile law, rights, treatment; examines current research.
- LAJ 398. Special Topics (1-6).**
- LAJ 400. Research Methods in Criminal Justice (4).** Prerequisite LAJ 300 or permission of instructor. This course examines current research in criminal justice and research methods and statistics. Students will critique current methods. Formerly LAJ 341. Students may not receive credit for both.
- LAJ 401. Ethics, Diversity, and Conflict in Criminal Justice (4).** Junior or Senior status, or by permission of instructor. Introduce students to a multi-cultural approach to practical legal ethics within the criminal justice system. The course covers law enforcement, corrections, and Alternative Dispute Resolution.
- LAJ 410. Legal Writing (4).** Prerequisite, Junior or Senior status or by permission of instructor. The pre-law or paralegal student will learn fundamental legal writing tools, in conjunction with basic rules on correspondence, retainer agreements and other commonly used documents.
- LAJ 426. Advanced Correctional Counseling (4).** Prerequisite LAJ 300 or permission of instructor. This course will provide students with specialized training in theory, and techniques required in the rapidly evolving practice of correctional counseling. Formerly LAJ 318. Students may not receive credit for both.
- LAJ 440. Basic Mediation (4).** Course provides an introduction to the philosophy, practice and skills required for basic mediation, which are explored through readings, lectures, demonstrations and skill building role plays.
- LAJ 450. Report Writing (4).** Prerequisite, Junior or Senior standing or by permission of instructor. Law enforcement and corrections students will learn basic writing in the context of specialized reports utilized in their fields.
- LAJ 451. Crime in America (4).** Prerequisite LAJ 300 or permission of instructor. American crime problems in historical perspectives. Social and policy factors affecting crime. Crime impact and trends, offender and victim profiles. Formerly LAJ 325. Students may not receive credit for both.
- LAJ 453. Domestic Violence Issues (4).** Prerequisite: LAH 300. This course provides an overview of domestic violence in our society and examines critical issues, including perspectives from the legislature, courts, police, prosecutors, and victims. Significant emphasis on these perspectives in Washington State.
- LAJ 459. Current Issues (4).** Prerequisites: Junior or Senior standing or by permission of instructor and senior standing. Current legal, correctional and enforcement issues will be explored. Course restricted to seniors only.
- LAJ 460. Terrorism (4).** Prerequisite: LAJ 300. Survey of domestic terrorism and United States interests in international terrorism, including concepts and theories of terrorism, history of terrorism, terrorist organizations, specific terrorist incidents, investigative techniques, and developing legal issues.
- LAJ 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- LAJ 491. Workshop (1-6).** Specialists will lead discussion of a variety of problems concerning the law and justice system. With the approval of the director of the program the course may be designated for S or U grades.
- LAJ 491. Teaching Experience in Law and Justice (1-4).** Prerequisite, completion of course in which teaching or assisting is to be done and approval of the instructor and department chair. May be repeated up to a total of 8 credits. Grade will be S or U.
- LAJ 495. Directed Research (1-5).** Prerequisite, permission of instructor and department chair. Individual research project. May be repeated up to a total of 10 credits. Grade will be S or U.
- LAJ 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- LAJ 498. Special Topics (1-6).** Prerequisite, LAJ 300. These courses will offer in-depth information on various special topics relating to current issues.
- LAJ 499. Seminar (1-5).** Prerequisite, permission of the instructor. With approval of the program director the course may be designated for regular letter grade or S or U depending upon course and method of instruction.

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: LAJ 340.

LIBRARY SCIENCE

Dean: Thomas M. Peischl

Faculty

Professors:

Daniel G. CannCasciato
John K. Creech
Gerard P. Hogan
Patrick L. McLaughlin
Mary J. Wise
Thomas Y. Yeh

Associate Professors:

Jennifer L. Jaques
Janice L. (Jan) Jorgensen
Patrick A. Owens

Assistant Professor

Kirsten Erickson

Library Science Course

LIB 145. Library Research Methods (2). Development of Information Literacy through the use of library resources and the Internet. Characteristics of classification systems. Organization of print and non-print resources. Selection/evaluation processes. Open to all students. Grade will be S or U.

MATHEMATICS

Faculty

Chair: **Stuart Boersma**
Bouillon 108D

Professors

Alla Ditta Raza Choudary, Algebraic Topology
James D. Harper, Harmonic Analysis
Scott M. Lewis, Mathematics Education,
History of Mathematics
Cen Tsong Lin, Probability and Mathematical
Statistics, Actuarial Science

Associate Professors

Stuart F. Boersma, Differential Geometry,
General Relativity
Stephen P. Glasby, Computational Algebra,
Representation Theory
Mark Oursland, Mathematics Education

Assistant Professors

Yvonne Chueh, Actuarial Science, Statistics
Tim Englund, Group Theory, Representation
Theory, Statistics
Jonathan Fassett, Topology, Dynamical
Systems
Michael Lundin, Mathematics Education
Aaron Montgomery, Topology, Algebra
W. Dan Curtis, Applied Mathematics

General Departmental Information

Mathematics is an expanding and evolving body of knowledge as well as a way of perceiving, formulating and solving problems in many disciplines. The subject is a constant interplay between the worlds of thought and application. The student of mathematics will find worthy challenges and the subsequent rewards in meeting them.

The general student will find preparatory courses in precalculus mathematics and traditional mathematics courses such as calculus, linear algebra, geometry, abstract algebra, and analysis. Also, more specialized courses in discrete mathematics, number theory and the history of mathematics are offered. Special needs of Computer Science majors, Elementary Education majors and general education requirements are also met by courses in the Mathematics Department.

For those desiring concentrated work in mathematics, the Mathematics Department offers four programs leading to Bachelor degrees. A Bachelor of Arts or Bachelor of Science in Mathematics prepares the student as a mathematician for industry or graduate work. A Bachelor of Arts in Secondary Teaching prepares the student to teach at the junior, middle or high school levels. A Bachelor of Science in Mathematics with an Actuarial Science specialization prepares the student to work as an actuary or in applied statistics. A Bachelor of Arts minor and a Secondary

Teaching minor are also available.

One graduate degree is offered: the Master of Arts for Teachers. This is described in the graduate section of the catalog.

All programs (major, minor, including electives) must be on file and approved by the Department at least one academic year preceding graduation.

Admission and Placement Notes

- Enrollment in MATH 100c, MATH 101, MATH 130, MATH 164 requires a satisfactory score on one of the following tests: SAT, ACT, the California Achievement Test (for teacher preparation), COMPASS Test or the Intermediate Assessment Test. The scores on the SAT or ACT tests must have been achieved within the last three years before math placement. The student with insufficient test scores is encouraged to enroll in developmental classes. For more information contact the Math Center in Bouillon 206 or 963-1834.
- Students who wish to enroll in Precalculus (MATH 153 or MATH 154) or Calculus (MATH 170 or MATH 172) and who have not had the necessary prerequisite course at a college or university must take the mathematics placement test. Student will be placed in accord with their results on this test as determined by the Mathematics Department. See the Mathematics Department for more details.
- Admission to any mathematics course having prerequisites requires either a suitable math placement test score or a grade of 2.0 or better in each listed prerequisite to that course.
- Admission to any major in the Mathematics Department will be considered after the first two quarters of calculus are taken (MATH 172, MATH 173). Transfer students with the calculus background will generally take and successfully complete (2.0 or better) ten hours of math beyond calculus to be admitted to a major. Application forms are available from the Mathematics Department office. Students must meet with an advisor in the Mathematics Department before being considered for major or minor. In addition, students must earn a minimum grade of C in any course which fulfills a major or minor requirement.

Bachelor of Arts

Mathematics Major (5100)

Required Courses	Credits
MATH 172, 173, Calculus	10
MATH 260, Sets and Logic	5
MATH 265, Linear Algebra I.	4
MATH 272, 273, Multivariable Calculus	10
MATH 461, 462, 463, Abstract Algebra	9
MATH 471, 472, 473, Advanced Analysis	9

Department-approved upper division

MATH electives. 13

Total 60

Mathematics Minor (5100)

Required Courses Credits
MATH 172, 173, Calculus

10
At least 12 credits of electives in Mathematics at the 200 level or above, which MUST include at least one of Math 260 or Math 265. 12

Total 22

Admission Requirements to Mathematics Teaching Secondary Major and Minor

Admission to the Mathematics Teaching Secondary Major or Minor is selective. A cumulative grade point average of 2.50 is required in the Pre-Admission courses listed below. Further, students must successfully complete MATH 260, Set and Logic, by spring quarter of the academic year of their acceptance into the program. The Mathematics Department will process applications once a year and notify students of their status by February 15. The deadline for submission of applications to the Department is January 15. A completed application must include the standard major application form and a mathematics advisor approved graduation plan.

Students must be accepted as a Mathematics Education major or minor prior to enrolling in mathematics classes beyond MATH 265, with the exception of MATH 311. Students applying for admission to the major may register for courses for the following quarter but will be dropped if not admitted. Upon admission to the major, all students will enroll in MATH 299E, Orientation seminar: Secondary Mathematics, in the subsequent spring quarter.

Students need to meet with a mathematics education advisor well in advance of requesting admission to the Secondary Mathematics Teaching Program.

Application Deadline: January 15

Notification of Acceptance into the program:
February 15

Pre-Admission Requirements: Applicants for admission into the Secondary Mathematics Teaching program.

- must have a 2.5 or better GPA in the following courses:
ENG 102, English Composition (4 credits)
MATH 130, Finite Mathematics (5 credits)
MATH 172, Calculus I (5 credits)
MATH 173, Calculus II (5 credits)
Pre-Admission Total: 19 credits
and

2. must have completed MATH 260, Set and Logic, with a grade of C or better, or be enrolled in MATH 260 concurrently with MATH 299E, Orientation Seminar: Secondary Mathematics, in the Spring Quarter of the academic year of his or her acceptance into the program.

Mathematics: Teaching Secondary Major (5101)

This major satisfies the endorsement for Mathematics. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
MATH 172, 173, 272 Calculus	15
MATH 355, College Geometry I	4
MATH 260, Sets and Logic	5
MATH 265, Linear Algebra I	4
MATH 299E, Orientation Seminar, Secondary Mathematics	2
MATH 311, Statistical Concepts and Methods	5
MATH 320, History of Mathematics	3
MATH 324, Methods and Materials in Math-Secondary	4
MATH 332, Discrete Models	4
MATH 360, Algebraic Structures I	3
MATH 361, Algebraic Structures II	3
MATH 499E, Senior Seminar: Secondary Mathematics	3
MATH 430, Introduction to the Theory of Numbers	3
MATH 455, College Geometry II	3
Total	61

Mathematics: Teaching Secondary Minor (5101)

This is an endorsable minor for student teaching.

Required Courses	Credits
MATH 172, 173, Calculus	10
MATH 260, Sets and Logic	5
MATH 265, Linear Algebra	4
Math 299E, Orientation Seminar: Secondary Mathematics	2
MATH 311, Statistical Concepts and Methods	5
MATH 320, History of Mathematics	3
MATH 324, Methods and Materials in Mathematics-Secondary	4
MATH 360, Algebraic Structures I	3
MATH 355, College Geometry I	4
MATH 455, College Geometry II	3
MATH 499E, Senior Seminar: Secondary Mathematics	3
Total	46

Middle Level Math/Science Teaching Minor (7160)

This minor is designed for students who wish to teach science and/or math at the middle level (grades 5-8). Completion of this minor results in a Middle Level Math/Science endorsement. The coursework provides experiences in math and science content and pedagogy including field experience. Students will learn about math, science, and the psychology of adolescents in addition to the more generalized coursework in their major. This minor is open only to students working on or currently holding teaching endorsements in Elementary Education, Biology, Chemistry, Earth Science, Mathematics, or Physics. Students interested in this minor should see an advisor as soon as possible to discuss overlapping requirements with the General Education Program (potentially 25 credits of this minor could satisfy General Education requirements).

Required Courses	Credits
(Complete all three areas not covered in major program)	
Science	
Three introductory science courses with lab (1 life science, 1 earth science/ astronomy, and 1 physical science required.)	
SCED 301, Interdisciplinary Science Inquiry	15
Math	
MATH 130, Finite Mathematics I	5
MATH 164, Foundations of Arithmetic I	5
MATH 250, Intuitive Geometry for Elementary Teachers	4
EDEL 468, Problem-solving Techniques for Middle Level	3
Other	
SCED 323/MATH 323, Teaching Experience in Math and Science	3
EDEL 477, Middle School Students and Their Environment	4
EDCS 482, Instruction and Assessment for the Middle Level	3
In Addition:	
Elementary Education Majors must take:	
EDCS 424, Reading in the Content Fields (3)	3
Secondary Science Majors must take:	
EDEL 323, Teaching Elementary School Mathematics (323)	3
Secondary Math Majors must take:	
SCED 322, Science in the Elementary Schools (3)	3
Total	50

Bachelor of Science Mathematics Major (5100)

Required Courses	Credits
MATH 172, 173, Calculus	10
MATH 260, Sets and Logic	5
MATH 265, Linear Algebra I	4
MATH 272, 273, Multivariable Calculus	10
MATH 311, Statistical Concepts and Methods	5
MATH 360, Algebraic Structures I	3
MATH 365, Linear Algebra II	3
MATH 376, 377, Elementary Differential Equations	6
Select one:	4
CS 110, Programming Fundamentals I (4)	
CS157, Introduction to COBOL Programming (4)	
CS177, Introduction to FORTRAN Programming (4) OR	
CS 187, Introduction to C Programming (4)	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics	15
MATH 413, Introduction to Stochastic Processes (5) OR	
MATH 464, Optimization Theory (5)	5
Select two of the following sequences:	18-19
MATH 411A, Introduction to Probability Theory and	
MATH 411B, 411C, Introduction to Mathematical Statistics (10)	
MATH 461, 462, 463, Abstract Algebra (9)	
MATH 471, 472, 473, Advanced Analysis (9)	
MATH 475, 476, 477, Applied Analysis (9)	
Total	88-89

Actuarial Science Specialization (5102)

An actuary is a business professional who uses specialized mathematical skills from probability and statistics to define, analyze and solve financial and social problems. Actuaries create and manage insurance programs which reduce the adverse financial impact of both expected and unexpected things that happen to people, such as illnesses, accidents and death. In addition, actuaries design pension programs, making sure there are sufficient resources to pay retirement and death benefits while also charging participants in the insurance or retirement plan a fair price.

The Bachelor of Science in Mathematics - Actuarial Science specialization is listed below and is designed to prepare a student in both the mathematics and business areas necessary for success in the rigorous but rewarding actuarial profession.

Required Courses	Credits
MATH 172, 173, Calculus	10
MATH 265, Linear Algebra I.....	4
MATH 272, 273, Multivariable Calculus.....	10
MATH 311, Statistical Concepts and Methods	5
MATH 410A, 410B, Advanced Statistical Methods	6
MATH 411A, Introduction to Probability Theory.....	4
MATH 411B, 411C, Mathematical Statistics ..	6
MATH 413, Introduction to Stochastic Processes	5
MATH 418A, 418B, Theory of Interest I, II ..	3,3
MATH 419A, 419B, 419C, Actuarial Mathematics I, II, III	3,3,3
ACCT 251, Accounting I	5
ECON 201, Principles of Economics, Micro ..	5
ECON 202, Principles of Economics, Macro ..	5
ECON 301, Intermediate Microeconomic Analysis	5
ECON 302, Intermediate Macroeconomic Analysis	5
FIN 370, Introductory Financial Management	5
FIN 475, Investments	5
CS 110, Programming Fundamentals I	4
CS 167, Visual Basic Programming	4

Total 108

Mathematics Courses

- MATH 100A. PreAlgebra** (5). This course is designed to prepare students for college mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts underlying algebra. Credits will not be allowed toward meeting Bachelor's degree requirements.
- MATH 100B. Introductory Algebra** (5). This course is designed to prepare students for college mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts of algebra. Credits will not be allowed toward meeting Bachelor's degree requirements.
- MATH 100C. Intermediate Algebra** (5). This course is designed to prepare students for college level precalculus mathematics. Symbolic, graphical, and numeric representations will be studied to understand and apply the concepts needed to be successful in precalculus. Credits will not be allowed toward meeting Bachelor's degree requirements.
- MATH 101. Mathematics in the Modern World** (5). Selected topics from the historical development and applications of mathematics together with their relationship to the development of our present society.
- MATH 130. Finite Mathematics I** (5). The

language of sets, counting procedures, introductory probability and decision-making, introductory descriptive statistics. Meets General Education "reasoning" requirement and prepares student for introductory statistics courses in various departments. Formerly MATH 130.1. Students may not receive credit for both.

(See note on math placement test at beginning of section for information regarding placement into 153, 154, 170, or 172.)

MATH 153. Pre-Calculus Mathematics I (5). Prerequisite, MATH 100C or equivalent, or permission of Department Chair. A foundation course which stresses those algebraic and elementary function concepts together with the manipulative skills essential to the study of calculus. Formerly MATH 163.1. Student may not receive credit for both.

MATH 154. Pre-Calculus Mathematics II (5). Prerequisite, MATH 153 or equivalent, or permission of Department Chair. A continuation of MATH 153 with emphasis on trigonometric functions, vectors, systems of equations, the complex numbers, and an introduction to analytic geometry. Formerly MATH 163.2. Students may not receive credit for both.

MATH 164. Foundations of Arithmetic I (5). Structure of the real number system. Properties of and operations on integers, rationals, decimal representation, percentages, proportion, graphing and elementary problem solving. Recommended for the prospective elementary school teacher. Formerly MATH 164.1. Students may not receive credit for both.

MATH 170. Intuitive Calculus (5). Prerequisite, MATH 153 or permission. An intuitive approach to the differential and integral calculus specifically designed for students in the behavioral, managerial, and social sciences. Not open to students with credit for MATH 172 or higher.

MATH 172. Calculus (5). Prerequisites, MATH 153 and MATH 154. Theory, techniques and applications of differentiation and integration of the elementary functions. Formerly MATH 172.1. Students may not receive credit for both.

MATH 173. Calculus (5). Prerequisites, MATH 172. Theory, techniques and applications of differentiation and integration of the elementary functions. Formerly MATH 172.2. Students may not receive credit for both.

MATH 250. Intuitive Geometry for Elementary Teachers (4). Prerequisite, MATH 164. An intuitive approach to the geometry topics relative to the elementary school curriculum.

MATH 260. Sets and Logic (5). Prerequisite, MATH 173 or CS 301 and MATH 172 or equivalents. Essentials of mathematical

proofs, including use of quantifiers and principles of valid inference. Set theory as a mathematical system.

MATH 265. Linear Algebra I (4). Prerequisite, MATH 173 or permission of instructor. Vector spaces, linear systems, matrices and determinants.

MATH 272. Multivariable Calculus (5). Prerequisite, MATH 173. Differential and integral calculus of multivariable functions and related topics. Formerly MATH 272.1. Students may not receive credit for both.

MATH 273. Multivariable Calculus (5). Prerequisite, MATH 272. Differential and integral calculus of multivariable functions and related topics. Formerly MATH 272.2. Students may not receive credit for both.

MATH 298. Special Topics (1-6).

MATH 299. Seminar (1-5).

MATH 299A. Seminar: Actuarial Science Problems I (2). Prerequisite, MATH 273 or permission of instructor. Students discuss and present problems using techniques from calculus and linear algebra important for actuaries. Formerly MATH 299.1. Students may not receive credit for both.

MATH 299E. Orientation Seminar: Secondary Mathematics (2). Prerequisite, Tier II Secondary Mathematics Education. Introductory seminar for new mathematics education students focusing on problem solving, technical presentation of solutions, and electronic portfolio preparation.

MATH 311. Statistical Concepts and Methods (5). Prerequisite, MATH 130 or MATH 310 or basic knowledge of probability and counting techniques. Hands-on activities for exploring data. Surveys, planned experiments and observational studies. Modeling, sampling distributions and statistical inference. MINITAB statistical computing language introduced and used extensively.

MATH 320. History of Mathematics (3). Prerequisite, MATH 260. A study of the development of mathematics and the personalities involved.

MATH 323. Teaching Middle School Mathematics and Science (3). Prerequisites: MATH 324 or EDEL 323 and SCED 324 or SCED 322. Prospective teachers will learn and use the methods and materials needed to teach middle school students mathematics and science with emphasis on the use of experiments, manipulatives, problems solving, cooperative learning, and communication of understanding. MATH 323 and SCED 323 are equivalent courses. Students may not receive credit for both.

MATH 324. Methods and Materials in Mathematics-Secondary (4). Prerequisites, MATH 355, MATH 265, EDCS 311 and permission of instructor.

MATH 330. Discrete Mathematics (5). Prerequisites, MATH 260 and Permission. Topics

from logic, combinatorics, counting techniques, graph theory and theory of finite-state machines. Formerly MATH 230. Students may not receive credit for both.

MATH 332. Discrete Models (4). Prerequisites, permission and Tier II Secondary Mathematics Education. Discrete models including graph theory, difference equations, and the models of social choice, and the inherent logic combinatorics, and algebra.

MATH 355. College Geometry I (4). Prerequisites: permission and Tier II Secondary Mathematics Education. An inductive and deductive approach to intuitive geometry, modern Euclidean geometry, history of geometry, and axiomatic systems in geometry.

MATH 360. Algebraic Structures I (3). Prerequisites, permission and Tier II Secondary Mathematics Education. First course in the structure of algebraic systems includes the study of real number systems and other algebraic systems in the development of group theory.

MATH 361. Algebraic Structures II (3). Prerequisites: permission, Tier II Secondary Mathematics Education, and MATH 360. The second course in the structure of algebraic systems, including rings, modules, and fields, and their associated morphisms.

MATH 365. Linear Algebra II (3). Prerequisite, MATH 265 or permission. Vector spaces, linear transformations, bilinear and quadratic forms, eigenvalues, eigenvectors, similarity, inner products and norms.

MATH 376. Elementary Differential Equations (3). Prerequisites, MATH 265 and MATH 272 or permission. Elementary methods of solutions of ordinary differential equations. Some numerical methods for solving ordinary differential equations with applications. Formerly MATH 376.1. Students may not receive credit for both.

MATH 377. Elementary Differential Equations (3). Prerequisites, MATH 376. Elementary methods of solutions of ordinary differential equations. Some numerical methods for solving ordinary differential equations with applications. Formerly MATH 376.2. Students may not receive credit for both.

MATH 410A. Advanced Statistical Methods (3). Prerequisite, MATH 311. A thorough treatment of regression and correlation. Chi-square and other enumeration statistics. Non-parametric statistical principles of experimental design. Examples will be from a variety of fields. Formerly MATH 410.1. Students may not receive credit for both.

MATH 410B. Advanced Statistical Methods (3). Prerequisite, MATH 410A. A thorough treatment of regression and correlation. Chi-square and other enumeration statistics. Non-parametric statistical principles of experimental design. Examples will be from

a variety of fields. Formerly MATH 410.2. Students may not receive credit for both.

MATH 411A. Introduction to Probability Theory (4). Prerequisite, MATH 273 or permission. Principal topics include: combinatorial theory, conditional probability, random variables, expectation and moments, generating functions, various discrete and continuous distributions, law of large numbers, central limit theorem. Formerly MATH 411.1. Students may not receive credit for both.

MATH 411B. Introduction to Mathematical Statistics (3). Prerequisite, MATH 411A. Derived distributions, point and interval estimation, hypothesis testing. Correlation and regression theory. Distribution free methods. Bayesian inference. Formerly MATH 411.2. Students may not receive credit for both.

MATH 411C. Introduction to Mathematical Statistics (3). Prerequisite, MATH 411B. Derived distributions, point and interval estimation, hypothesis testing. Correlation and regression theory. Distribution free methods. Bayesian inference. Formerly MATH 411.3. Students may not receive credit for both.

MATH 412. Applied Numerical Methods (5). Prerequisites, MATH 272 and Math 265 or permission. Linear systems and their solutions; error analysis; iteration; interpolation; numerical integrations; splines.

MATH 413. Introduction to Stochastic Processes (5). Prerequisite, MATH 411A. The Wiener Process, conditional probability and conditional expectation. Stationary and evolutionary processes. Various Poisson processes. Renewal counting processes. Discrete parameter Markov chains.

MATH 414. Time Series Analysis (3). Prerequisites, MATH 410B. Model building, parameter estimation, diagnostic checking of time series data; ARIMA models and forecasting. Analysis of seasonal models.

MATH 415. Advanced Topics in Actuarial Sciences (3). Prerequisites, MATH 411A. Topics chosen from credibility and loss distributions, risk theory, and the mathematical theory of interest.

MATH 416A. Actuarial Science Problems II (1-2). Prerequisite, MATH 411A or concurrent registration. Students discuss and present problems in probability and mathematical statistics important for actuaries. Formerly MATH 499.1 and MATH 416.1. May be repeated for a total of 3 credits.

MATH 416B. Actuarial Science Problems III (1-2). Prerequisite, MATH 410B or concurrent registration. Students discuss and present problems in applied statistics important for actuaries. Formerly taught as MATH 499.2 and MATH 416.2. May be repeated for a total of 3 credits.

MATH 417A. Loss Models I (3). Prerequisites, MATH 411A. Modeling process, calibration and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures. Formerly MATH 417.1. Students may not receive credit for both.

MATH 417B. Loss Models II (3). Prerequisite, MATH 417A. Modeling process, calibration and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures of confidence for decisions based upon the model. Formerly MATH 417.2. Students may not receive credit for both.

MATH 417C. Loss Models III (3). Prerequisite, MATH 417B. Modeling process, calibration and evaluation. Analyzing data, determining a suitable model including parameter values, and providing measures of confidence for decisions based upon the model. Formerly MATH 417.3. Students may not receive credit for both.

MATH 418A. Theory of Interest I (3). Prerequisites, MATH 173 and permission. Applications of discrete and calculus-based methods to simple and compound interest, force of interest, bonds, annuities, amortization and sinking funds. Formerly MATH 418.1. Students may not receive credit for both.

MATH 418B. Theory of Interest II (3). Prerequisites, MATH 418A and permission. Applications of discrete and calculus-based methods to simple and compound interest, force of interest, bonds, annuities, amortization and sinking funds. Formerly MATH 418.2. Students may not receive credit for both.

MATH 419A. Actuarial Mathematics I (3). Prerequisites, MATH 411A and permission. Mathematics of analyzing and pricing insurance, annuities and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Formerly MATH 419.1. Students may not receive credit for both.

MATH 419B. Actuarial Mathematics II (3). Prerequisites, MATH 419A and permission. Mathematics of analyzing and pricing insurance, annuities and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Formerly MATH 419.2. Students may not receive credit for both.

MATH 419C. Actuarial Mathematics III (3). Prerequisites, MATH 419B and permission. Mathematics of analyzing and pricing insurance, annuities and pension products. Life contingencies, risk theory, and techniques in reserving and valuation. Formerly MATH 419.3. Students may not receive credit for both.

MATH 425. Problem-Solving Techniques in Mathematics for Elementary School

- Teachers (3).** Prerequisite, MATH 164. Patterns and techniques of problem-solving; formulating hypotheses; programming solutions; generalizing; investigating and creating problems.
- MATH 430. Introduction to Theory of Numbers (3).** Prerequisite, MATH 260. Euclidean algorithm, fundamental theorem of arithmetic, diophantine equations, primitive roots and indices and other number theory topics.
- MATH 451. Introduction to Topology I (3).** Prerequisites, MATH 260 and MATH 265. An introduction to point-set and algebraic topology. Topics may include metric spaces, topological spaces, homotopy theory and the fundamental group. Formerly MATH 451.1. Students may not receive credit for both.
- MATH 452. Introduction to Topology II (3).** Prerequisite, MATH 451. An introduction to point-set and algebraic topology. Topics may include metric spaces, topological spaces, homotopy theory and the fundamental group. Formerly MATH 451.2. Students may not receive credit for both.
- MATH 455. College Geometry II (3).** Prerequisites, permission, MATH 355, and Tier II Secondary Mathematics Education. Introduction to non-Euclidean geometry including history, deductive reasoning, and topics in hyperbolic and elliptical geometry.
- MATH 461. Abstract Algebra (3).** Prerequisites, MATH 260 and MATH 265. Algebraic structures such as groupoids, groups, rings and fields. Formerly MATH 461.1. Students may not receive credit for both.
- MATH 462. Abstract Algebra (3).** Prerequisite, MATH 461. Algebraic structures such as groupoids, groups, rings and fields. Formerly MATH 461.2. Students may not receive credit for both.
- MATH 463. Abstract Algebra (3).** Prerequisite, MATH 462. Algebraic structures such as groupoids, groups, rings and fields. Formerly MATH 461.3. Students may not receive credit for both.
- MATH 464. Optimization Theory (5).** Prerequisite, MATH 265 and MATH 311, or permission. Decision analysis, simulation theory, queuing theory; linear and dynamic programming.
- MATH 471. Advanced Analysis (3).** Prerequisites, MATH 260, and MATH 273. Further development of properties of calculus. Formerly MATH 471.1. Students may not receive credit for both.
- MATH 472. Advanced Analysis (3).** Prerequisite, MATH 471. Further development of properties of calculus. Formerly MATH 471.2. Students may not receive credit for both.
- MATH 473. Advanced Analysis (3).** Prerequisite, MATH 472. Further development of properties of calculus. Formerly MATH 471.3. Students may not receive credit for both.
- MATH 475. Applied Analysis (3).** Prerequisite, MATH 376 or permission. Selected topics from advanced analysis especially useful to the engineer, chemist, physicist and applied mathematician. Formerly MATH 472.1. Students may not receive credit for both.
- MATH 476. Applied Analysis (3).** Prerequisite, MATH 472. Selected topics from advanced analysis especially useful to the engineer, chemist, physicist and applied mathematician. Formerly MATH 472.2. Students may not receive credit for both.
- MATH 477. Applied Analysis (3).** Prerequisite, MATH 476. Selected topics from advanced analysis especially useful to the engineer, chemist, physicist and applied mathematician. Formerly MATH 472.3. Students may not receive credit for both.
- MATH 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- MATH 491. Workshop (1-6).** The title of the workshop and the credit to be earned shall be determined at the time the workshop is approved. Designed to give an opportunity for individual and group study of problems in mathematics.
- MATH 492A. Laboratory Experience in Teaching Mathematics (2).** Prerequisite, 30 credits in mathematics. Serves the purpose of providing the opportunity for competent senior or graduate students to receive credit and experience in developing procedures and techniques in teaching college level mathematics. Formerly MATH 492.1. Students may not receive credit for both.
- MATH 492B. Laboratory Experience in Teaching Mathematics (2).** Prerequisite, 30 credits in mathematics. Serves the purpose of providing the opportunity for competent senior or graduate students to receive credit and experience in developing procedures and techniques in teaching college level mathematics. Formerly MATH 492.2. Students may not receive credit for both.
- MATH 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- MATH 498. Special Topics (1-6).**
- MATH 499. Seminar (1-5).**
- MATH 499E Senior Seminar: Secondary Mathematic (3).** Prerequisites: permission, MATH 324, and Tier II Secondary Mathematics Education. Individualized projects using oral presentations and written electronic portfolio to show mastery in all program outcomes for teaching secondary mathematics.

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: MATH 130.2 Finite Mathematics II (5); MATH 162. Technical Mathematics (5); MATH 165. Plane Trigonometry (3); MATH 197. Honors Individual Study (1-12); MATH 397. Honors Individual Study (1-12); MATH 456 Differential Geometry (3); and MATH 481, 482, 483. Numerical Analysis (3,3,3).



MILITARY SCIENCE

(Army Reserve Officers' Training Corps)

Faculty

Chair: Rodney F. Laszlo, Lieutenant Colonel, Signal, Peterson Hall 202

Professor

Rodney F. Laszlo, Lieutenant Colonel, Signal, Command General Staff College, M.S., Information Systems Management

Assistant Professors

Debra (Debbie) C. Allen, Major, Transportation Corps (Public Affairs), B.S., Public Administration
DeAnna L. Bridenback, Captain, Aviation, B.S., Commercial Aviation Transportation
Tyler S. Oxley, Captain, Signal, B. A., Communications

Instructors

Tom G. Sadberry, Jr., Master Sergeant, Infantry
Charles (Terry) T. Ragsdale, Sergeant First Class, Air Defense Artillery

General Departmental Information

The Military Science Department courses are designed to prepare scholars, athletes and junior leaders for commissioning in the United States Army. Students who complete the Military Science program and meet commissioning requirements will be eligible for a commission as a Second Lieutenant in the U.S. Army, Army Reserve or the Army National Guard. The on-campus instructional program is designed to fit into the regular academic schedule of the University and is taught by Army Professors and Instructors.

The academic program consists of military science, leadership labs, and off-campus summer training. Academic studies include courses in basic military tactics, principles of leadership, officership, communication, personnel and logistics management, staff management procedures, physical conditioning, land navigation, and military law. Various training activities are scheduled each quarter to further familiarize the student with the ROTC program.

Textbooks (for the MSL 100 and MSL 200 classes only) and uniform items (for all class levels) are furnished through the Department of Military Science. The MSL 100 and MSL 200 classes are open to any student to explore their military interests and are non-contractual. Advancement to MSL 300 and MSL 400 courses to complete a

Minor in Military Science is by permission only.

Upon completion of the Military Science Core (OPTION 1, 2, or 3; see below) requirements, National Advanced Leadership Camp, and receipt of a Bachelor's degree, students seeking an Officer Commission are able to select full-time employment (active Army) or part-time employment through the Army National Guard or the Army Reserves.

Additional information concerning the Military Science program may be obtained by writing: Central Washington University, Professor of Military Science, Peterson Hall, 400 E. 8th, Ellensburg, Washington 98926-7569, or by visiting the Military Science Department in Peterson Hall, Room 202 or by calling (509) 963-3518. You can email your questions to roo@cwu.edu.

POST BACHELOR'S FELLOWSHIPS: Graduating seniors may compete for several fully-funded Army graduate fellowships.

TRANSFER STUDENTS: Students transferring from other institutions, including community colleges considering entrance in the Military Science Program must make an appointment for a departmental interview for candidacy and scholarships.

GRADUATE STUDENTS: Graduate students interested in obtaining a commission as a Second Lieutenant should contact the Military Science Department in Peterson Hall for academic planning and application.

VETERANS: Veterans are encouraged to contact one of the Military Science academic advisors for information and outline of benefits available while participating in the ROTC program.

SCHOLARSHIPS: ROTC scholarships pay tuition and required fees. They're awarded on merit - academic achievements, extracurricular activities, and personal interviews. Four-, three- and two-year scholarships are available each academic year to qualified students. Applications can be obtained from the Military Science Department.

STIPENDS: All fully contracted cadets receive a stipend (\$250 freshman, \$300 sophomore, \$350 junior, \$400 senior) for each academic month plus an allowance for books and other educational items. Non-scholarship students can receive the stipend as a contracted cadet during their last two years.

SPECIAL TRAINING OPPORTUNITIES: Summer training opportunities are through the Department of the Army Schools. The available schools include: Airborne (parachute) training, Air Assault training, Northern Warfare School, and Special Forces. Additionally, Cadet Troop Leadership Training (CTLT) is also available to all cadets who have completed the

Military Science Minor Core, been accepted in the Military Science Minor (5425), completed the MSL 301, 302, 303 courses of study and the National Advanced Leadership Camp. CTLT provides leadership experience in an Active Army Unit for two weeks prior to returning for the senior year of college study. CTLT is available in the United States, Europe, and the Pacific Rim. Specialized training opportunities are by permission only.

Prerequisites for Advancement to the Military Science Minor

1. Admission into the MSL Minor will be based upon an overall grade point average (GPA) of 2.5.
2. The Department Chair may admit a limited number of students with GPAs under 2.5.
3. Students seeking the Military Science Minor must complete all application requirements prior to declaring Military Science as a minor.
4. Complete the Core requirements with a GPA of 3.0 or higher.
5. The Department of Military Science reserves the right to modify these requirements in special cases.

Military Science Minor Core

Option 1*

Required Courses	Credits
MSL 101, Foundations of Officership	1
MSL 102, Basic Leadership	2
MSL 103, Advanced Leadership.	2
MSL 201, Individual Leadership Studies	2
MSL 202, Leadership and Teamwork	2
MSL 211, Land Navigation	2
Military Science Core Total	11

Option 2

Required Courses	Credits
**MSL 292, Leader's Training Course, Internship.	8
Select 3 credits from the list of approved electives	3
Military Science Core Total	11
**This course can be taken as non-credit)	

Option 3*

Verification of completion of prior military service initial entry program. This option is by permission only. See department for further information.
*No military obligation is incurred under Option 1 or Option 3.

Military Science Minor (5425)

Participation in this minor is contingent upon completion of the ROTC Core (Option 1, 2 or 3) listed above and acceptance as a contracted student in the Advanced Course in the Army ROTC program. Application may be made at the Military Science Department, Peterson Hall.

Required Courses	Credits
MSL 301, Leadership and Problem Solving	3
MSL 302, Leadership and Ethics	3
MSL 303, Leadership and Small Group Tactics	3
MSL 401, Military Science and Tactics IV ..	4
MSL 402, Officership	4
MSL 403, Officership II	2
HIST 314, Military History of the US	5
Select from the following:	2-5
BSED 102, Computer Keyboarding Skill Building (2)	
IT 101, Computer Applications (3)	
CS, Any Course (4-5)	
Total	26-29

Military Science Courses

MSL 101. Foundations of Officership (1). Introduces students to issues and competencies that are central to a commissioned officer's responsibilities. Establishes framework for understanding officership, leadership, and Army values followed and "life skills" such as physical fitness and time management. Open to all students. Formerly MLS 101

MSL 102. Basic Leadership (2). Establishes foundation of basic fundamentals such as problem solving, communications, briefings, effective writing, goal setting, techniques for improving listening and speaking skills, and an introduction to counseling. Open to all students. Formerly MLS 103

MSL 103. Advanced Leadership (2). Studies in problem solving, communications, effective writing, goal setting, techniques of listening, advanced speaking skills and professional counseling. Open to all students. Formerly MLS 104

MSL 201. Individual Leadership Studies (2). Students identify successful leadership characteristics through personal experience and observation of others during hands-on team building exercises. Explores persuasion techniques and the continuum of guidance to determine leadership styles. Open to all students. Formerly MLS 205

MSL 202. Leadership and Teamwork (2). Examines how to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem solving process, and obtaining team buy-in through immediate feedback. Open to all students. Formerly MLS 210

MSL 211. Land Navigation (2). Prerequisite, permission of instructor. Principles of land navigation and orienteering with practical field applications. Formerly MLS 211

MSL 212. Leadership Laboratory (1). Prerequisites, permission of instructor. Practical experience in leadership and basic military skills. May be repeated. Formerly MLS 212

MSL 292. Leader's Training Course, Internship (8). Basic military skills and leadership techniques taught at Ft. Knox, KY, during the summer. Qualifies the student for enrollment in the ROTC Advanced Course. Training emphasizes leadership development and can be taken in place of the Basic Course. Students receive pay, food, lodging and travel expenses to and from Ft. Knox, KY. By permission only. Formerly MLS 292

MSL 293. Ranger Challenge Training (2). Prepares students to compete as a team member on the CWU Ranger Challenge team. Must be in good physical condition. Must be medically cleared for participation in collegiate-level sports. Recommend concurrent enrollment in PEF 118, Military Conditioning. By permission only. Formerly MLS 293

MSL 296. Individual Studies in Military Science (1-15). Formerly MLS 296

MSL 298. Special Topics (1-6).

MSL 301. Leadership and Problem Solving (3). Prerequisite, basic course or equivalent, or permission of Department Chair. Students conduct self-assessment of leadership style, develop personal fitness regimen, and learn to plan and conduct individual/small unit tactical training while testing reasoning and problem-solving techniques. Students receive direct feedback on leadership abilities. Required for Commissioning. Formerly MLS 310.

MSL 301LAB. Military Science and Tactics III Laboratory (1). Requires concurrent enrollment in MSL 301. Practical experience and application in first aid, weapons, communications, and advanced land navigation. Formerly MLS 310.1 and MSL 301.1.

MSL 302. Leadership and Ethics (3). Prerequisite, MSL 301 or permission of Department Chair. Students learn small group leadership methods with emphasis on problem solving and dealing with situational change required for Commissioning. Formerly MLS 311

MSL 302LAB. Military Science and Tactics III Laboratory (1). Requires concurrent enrollment in MSL 302. Practical experience and application in small unit leadership techniques, and small unit tactics. Formerly MLS 311.1 and MSL 302.1.

MSL 303. Leadership and Small Group Tactics (3). Prerequisite, MSL 302 or permission of Department Chair. Students learn and demonstrate small unit tactics, land navigation methods, while using advanced problem-solving techniques.

Emphasis on decision-making and communication skills. Required for Commissioning. Formerly MLS 312

MSL 303LAB. Military Science and Tactics III Laboratory (1). Requires concurrent enrollment in MSL 303. Practical experience integration of small unit tactics, land navigation, techniques of fire support and military skills. Formerly MLS 312.1 and MSL 303.1.

MSL 314. Military History of the United States (5). A comprehensive and systematic survey and analysis of the American Military experience from colonial times through the Vietnam War. MSL 314 and HIST 314 are equivalent courses. Students may not receive credit for both. Formerly MLS/HIST 314.1.

MSL 392. National Advanced Leadership Camp Preparation (2). Prerequisite, MSL 302 or permission of Department Chair. Practical exercise in small unit leadership and tactics. Prepares the student for National Advanced Leadership Camp. Formerly MLS 392

MSL 398. Special Topics (1-6).

MSL 401. Leadership and Management (4). Prerequisite, MSL 303. Develops student proficiency in planning and executing complex operations, functioning as a member of a staff, and mentoring subordinates. Students explore training management, methods of effective staff collaboration, and developmental counseling techniques. Required for Commissioning. Formerly MLS 410

MSL 402. Officership (4). Prerequisite, MSL 401. Study includes case analysis of military culture and practical exercises on establishing a command climate. Students must complete a quarter long Senior Leadership Project that requires them to plan, organize, collaborate, analyze, and demonstrate their leadership skills. Required for Commissioning. Formerly MLS 411.

MSL 403. Officership II (2). Prerequisite, MSL 402. Emphasis on analyzing case and situational studies which cover contemporary leadership problems. Required for Commissioning. Formerly MLS 412

MSL 492. National Advanced Leadership Internship (8-15). Prerequisites, MSL 301, 302, 303. Practical exercise in small unit leadership and tactics. Five-week camp at Ft. Lewis, WA. Required for Commissioning. Formerly MLS 492

MUSIC

Faculty

Chair: Peter Gries
Hertz Hall 101

Professors

Joseph Brooks, Clarinet, Saxophone,
Woodwind Methods
Larry D. Gookin, Bands, Low Brass, Music
Education, Conducting
Peter Gries, Piano, Theory, Counterpoint,
Analysis
Linda Marra, Voice, Opera, Diction,
Literature, Pedagogy
Mark Polishook, Composition, Theory,
Orchestration, Electronic/Computer
Music
Carrie Rehkopf Michel, Violin, Chamber
Music
John Michel, Cello, Chamber Music,
Pedagogy
Hal Ott, Flute, Recorder, History, Literature
John F. Pickett, Piano, Theory, Music History
Jeffrey Snedeker, Horn, Brass Methods,
Music History

Associate Professors

Chris Bruya, Jazz Studies, Theory
Vijay Singh, Jazz Studies, Choir, Voice,
Music Business

Assistant Professors

Mark Babbitt, Trombone, Symphonic Band,
Theory
Mark Goodenberger, Percussion
John Harbaugh, Trumpet, Jazz Studies
Diane Reich, Voice, Opera
Linda Woody, Music Education

Piano Technician

Harry Whitaker

Instructors

David Asplin, Composition
Sarah Bahouddin, Oboe
Shirley Diamond, Saxophone, Woodwind
Methods
Jim Durkee, Guitar
Alan Futterman, Bassoon
Margret Gries, Upper Strings Class Methods,
Music History, Piano, Organ,
Harpsichord, Aesthetics
Jon Hamer, String Bass
Scott Hosfeld, Viola, Chamber Music
Marcia Kaufmann, Chamber Music
Sid Nesselroad, Voice
Barbara Pickett, Piano, Class Piano

Artist in Residence:

Paul-Elliott Cobbs, Orchestra Conductor

General Departmental Information

The Music Department of Central Washington University serves the academic community through offering of courses,

cultural activities, and degrees relevant to the needs of its students. Within this comprehensive university, the Department functions as the component of a liberal arts institution that provides education in the musical arts.

The Department offers undergraduate curricula leading to the Bachelor of Music and Bachelor of Arts degrees and graduate work leading to the Master of Music degree. The department seeks to provide the opportunity for all students to develop into self-sufficient, secure and well-informed musicians and to instill in them an aspiration for continual growth in knowledge and acquisition of skills. Academic coursework, ensemble experience and applied music study are directed to these goals. Rigorous expectations for academic achievement and applied proficiency are set within a nurturing environment that acknowledges the uniqueness of each student's background, goals and aptitude. It is the responsibility of the department to advise students of these expectations and help each to succeed; it is the student's responsibility to realize these expectations as fully as possible.

The Department of Music is an institutional member of the National Association of Schools of Music (NASM).

All entering students who plan to pursue either a major or minor in the Department of Music must demonstrate their performance ability before a faculty committee. Based on this audition, the Music Department will determine the student's admissibility into a specific major or minor area. Auditions are scheduled for specific dates each year. However, other dates are available through prior scheduling. Information regarding audition dates, schedules, and repertoire requirements can be obtained by contacting the music office. Students who do not qualify for admission into the Department may be placed on departmental probation. This will allow them to enroll in some basic musicianship classes and to pursue applied study on either the group or the secondary level. Probationary students may use the quarter ending jury as an audition for reconsideration of their admission. No student will be allowed to graduate without removing the probationary status and accruing credits on the level of college applied study.

A keyboard proficiency requirement must be met by all Music majors and music teaching minors. Students unable to demonstrate essential keyboard skills must enroll in MUS 154A, II, and III at the appropriate assigned level in the year of entrance. Upper division transfer students not meeting the required keyboard proficiency may enroll in upper division courses only if concurrently enrolled in MUS 154A. If a student cannot meet the

proficiency requirements at the conclusion of three quarters, he or she must continue to register for piano study until this requirement is displayed. Music Education majors will not be placed or scheduled for student teaching until this proficiency is completed.

All Music majors, including B.M. and B.A. degrees, must register for a major ensemble which is appropriate to their major performance area during each quarter of enrollment as a full time student. Piano and Guitar majors may, with permission of the applied instructor and approval of the Department Chair, substitute up to three quarters of chamber music experience (MUS 217, 417) for major ensemble credit. Music Education majors, during the quarter of student teaching, are exempt from this requirement. The major ensembles are Wind Ensemble, Choir, Chamber Choir, Symphonic Band, Marching Band, and University Orchestra. Only these ensembles will generate credit which will accrue for degree requirements.

All students majoring in Music, and those students who are non-majors and enrolled in secondary applied music study (MUS 171, 271, or 371), must attend the student recital hour on Tuesdays at 2 p.m., and attend faculty and student recitals and other university music functions in accordance with requirements set forth each quarter.

Any student who has been accepted into the Music Department as a Music major will enroll in "Major Applied Area" applied instruction (MUS 164, 264, 364, 464, 564) in compliance with their degree requirements. Music major students pursuing study in a secondary applied area and non-music major students will enroll in "Secondary Applied Area" (MUS 171, 271, 371) applied instruction. Enrollment for non-major performance area applied instruction will be available to students based on degree requirements and on a space available basis. Non-music major students must successfully complete an audition for a faculty committee to be considered for these lessons. An examination in performance (Jury) is required of all students who are enrolled in either a "Major Applied Area" (private lessons) or the MUS 371 "Non-Major Applied Area" at the conclusion of each quarter. Six hours practice per week is the minimum required for each 30 minutes of lesson time per week.

A theory placement examination is required for all Freshman Music students to determine their correct status in the theory program. This examination is given during the first class period of MUS 144. Transfer students who have not taken music theory courses must also take this examination.

Theory credits earned at accredited colleges and universities with a grade of C or better will be honored by the CWU Music

Department, provided they reflect courses that have been deemed as equivalent in scope to those in the CWU curriculum. Students who have completed theory courses at a community college and want to have these requirements waived must petition the Music Department. If these courses are accepted and the requirements waived, students must still honor the total credit requirements for the chosen degree. Transfer students whose theory courses from a community college are accepted must also take a written diagnostic test in music theory during the first quarter in residence. Students will be informed as to their performance on the diagnostic test and advised of an appropriate course of action; this advisement is for the student's benefit, but will not result in additional course requirements.

Admission to departmental honors program: The student must submit a letter of application to the Department Chair in the junior or senior year, stating: (a) the proposed honors project, date of completion, and name of the faculty advisor for the project; (b) current grade point average in music; (c) current overall grade point average.

The student must complete an interview with the honors committee and project advisor to establish: (a) preliminary course requirements essential to successful completion of the proposed project; (b) number of individual study credit hours (MUS 497, 1-12 credits) to be devoted to the project.

Projects Appropriate for Honors

- Solo recital
- Original composition
- Arrangement (instrumental, choral, or combination)
- Supervision or direction of musical performance (This can include exceptional service as a teaching assistant under faculty supervision.)
- Scholarly research paper
- Major operatic role performance
- Major solo performance (concerto, oratorio, suite, cycle, etc.) with band, orchestra, choir, or chamber ensemble.
- Scholarly and musical requisites
- Cumulative overall grade point average of 3.00
- Music grade point average of 3.40
- Outstanding ability and superior musicianship demonstrated in completed project.

Final Honors Project Acceptance Requirements

Approval of the completed project by the honors committee, after consultation with the faculty project advisor and Department Chair. Interested students are encouraged to consult with the honors advisor.

Music Core Requirements

All music majors must complete a sequence of courses that have been designated as Music Core Requirements.

Courses	Credits
MUS 104, Introduction to Musical Studies ..	3
MUS 144, 145, 146, First Year Theory*	9
MUS 244, 245, 246, Second Year Theory	9
MUS 372, 373, 374, Music History	12
MUS 341, 342, Conducting I and II	6

Core Total 39

*Students enrolled in the first year theory sequence (MUS 144, 145, 146) must have passed or be currently enrolled in the corresponding Class piano course (MUS 154A). A waiver of this requirement can be obtained by demonstrating keyboard skills to any piano faculty member.

Bachelor of Music

Student advancement through performance levels (164-464) is determined by jury examination. In addition, an evaluation by an appointed faculty committee of the student's general musicianship and performance abilities will be conducted at the end of the sophomore year to determine status toward the Bachelor of Music degree. All Bachelor of Music performance majors must successfully complete eight credits at the 464 level, present a joint recital in the junior year and a full recital in the senior year.

Theory/Composition Major (5456)

Required Courses	Credits
Music Core Requirements	39
MUS 171A, Piano	3
If keyboard is the major applied area, select another applied area for study	
MUS 164, 264, Major Applied Area	12
MUS 340, 440, Analytical Techniques I and II	6
MUS 343, 346, Counterpoint I and II	6
MUS 347, Electronic Music	6
Performance in approved ensembles	24
Must include 12-18 credits in large ensemble(s) AND	
6-12 credits in chamber ensembles	
MUS 120, 220, 320, 420, Composition	24
MUS 422A, Orchestration	3
Music electives	5

Total 128

Keyboard or Guitar Performance Major (5457)

Required Courses	Credits
Music Core Requirements	39
MUS 164-464, Major Applied Area (Individual Instruction)	36
MUS 340, 440, Analytical Techniques I and II	6
MUS 343, Counterpoint I	3
MUS 425A (Keyboard) or MUS 425H (Guitar), Pedagogy (Studio)	3
MUS 426A (Keyboard) or MUS 426H (Guitar), Literature (Studio)	3
Performance in approved ensembles	21
Must include 6-12 credits in large ensemble(s) AND	
9-15 credits in chamber ensembles and for keyboard accompanying (minimum of 4 credits each.)	
Music electives	12

Total 123

Percussion Performance Major (5458)

Vocal Performance Major (5459)

Wind Performance Major (5460)

String Performance Major (5461)

Required Courses	Credits
Music Core Requirements	39
MUS 164-464*, Major Applied Area	36
MUS 340, Analytical Techniques I	3
MUS 343, Counterpoint I	3
MUS 425B-E,G**, Pedagogy (Studio)	3
MUS 426B-E,G**, Literature (Studio)	3
Performance in approved ensembles	30
Must include 10-12 quarters (20-24 credits) in large ensemble(s) AND	
6-10 credits in chamber ensembles	
Music electives	6

Total 123

*Prior to completion of the Bachelor's Degree, Vocal performance majors must:

- 1) be able to sing with correct pronunciation and inflection in French, German and Italian;
- 2) demonstrate the ability to translate musical texts in French and German;
- 3) demonstrate competency in French or German equal to the successful completion of French or German 153.

**Select the performance area specific to your major: Vocal: B; String: C; Wind: D or E; Percussion: G.

Bachelor of Arts**Music Business Major (5470)**

This major will develop musicians who are knowledgeable in the areas of business. Musicians who complete this major may pursue careers in retail and wholesale music sales, arts management, arts promotion, recording operations, copyright and licensing works, and other areas related to the business side of music.

Required Courses	Credits
Music Core Requirements	36
MUS 154A, Class Piano.....	3
*MUS 164/264, Major Performance Area..	12
Major Ensembles	22

Music/Business Required Courses	Credits
MUS 490, Cooperative Education	2-10
**MUS or BUS upper division electives ..	0-10

Business Required Courses	Credits
ACCT 301, Financial Accounting Analysis OR ACCT 251, Accounting I.....	5
MUS 482, Music Business	3
BUS 241, Legal Environment of Business....	5
COM 208, Introduction to Media Writing	4
OMIS 221, Introduction to Business Statistics	5
MGT 380, Organizational Management	5
HRM 381, Management of Human Resources OR MGT 481, Organizational Behavior.....	5
MKT 360, Principles of Marketing	5
Business electives.....	7

Total 122

*Must include at least 4 credits at the MUS 264 level.

**Credits for MUS 490 and MUS and/or BUS electives must total at least 12, with a minimum of 2 credits of MUS 490.

Music Education Major (5455) with Specialization

All students majoring in Music Education will be reviewed and counseled by the Music Education committee during each year of full-time enrollment. The purpose of these reviews is to assist the student in developing all the skills necessary to be an effective music educator. One year before student teaching the student's accomplishments are reviewed by the entire music faculty. In order to receive an endorsement to student teach, the student must receive a satisfactory evaluation in all areas of music study. All Music Education majors must pass the required piano proficiency examination prior to endorsement for student teaching. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Broad Area Specialization (5451)

This major satisfies the endorsements for Music-General, Music-Instrumental, and Music-Choral.

Qualifies for teaching elementary, junior high and senior high instrumental and choral music. Completion of this major will result in recommendation for endorsement in music K-12, instrumental music (K-12), and choral music (K-12). To qualify for student teaching, the following courses must be completed: MUS 323, 325, 329, 341, 342.

Required Courses	Credits
Music Core Requirements	39
MUS 154A, Class Instruction (Piano).....	2
MUS 154B, Class Instruction (Voice)	2
MUS 254C, Class Instrumental Methods (Strings).....	2
MUS 254D, Class Instrumental Methods (Woodwinds)	2
MUS 254E, Class Instrumental Methods (Brass).....	2
MUS 254G, Class Instrumental Methods (Percussion)	1
MUS 323, 325, 329, Music Education	10
MUS 343, Counterpoint	3
Major Ensemble participation each quarter in residence (6 credits must be in ensemble of secondary instrument).....	22
Major Applied Study including a minimum of four credits of MUS 364 level	12

Total 97

Instrumental Music Specialization (5463)

This major satisfies the endorsement for Music-Instrumental.

Qualifies to teach elementary, junior high and senior high instrumental/general music. Completion of this specialization will result in recommendation for endorsements in instrumental music K-12. To qualify for student teaching, the following courses must be completed: MUS 325, 329, 341, 342.

Required Courses	Credits
Music Core Requirements	39
MUS 154B, Class Instruction (Voice)	2
MUS 254C, Class Instruction (Strings).....	2
MUS 254D, Class Instrumental Methods (Woodwinds)	2
MUS 254E, Class Instrumental Methods (Brass).....	2
MUS 254G, Class Instrumental Methods (Percussion)	1
MUS 325, 329, Music Education	7
MUS 343, Counterpoint	3
Major Ensemble participation each quarter in residence.....	22
Major Applied Study including a minimum of four credits of MUS 364 level	12

Total 92

Choral Music Specialization (5462)

This major satisfies the endorsement for Music-Choral.

Qualifies to teach elementary, junior high and senior high choral/general music. Completion of this specialization will result in recommendation for endorsements in choral music K-12. To qualify for student teaching, the following courses must be completed: MUS 323, 329, 341, 342.

Required Courses	Credits
Music Core Requirements	39
MUS 154A, Class Instruction (Piano).....	2
MUS 230, Diction	3
MUS 323, 329, Music Education	7
MUS 343, Counterpoint	3
MUS 425B, Voice Pedagogy	3
Major Choral Ensemble participation each quarter in residence.....	22
Major Applied Study including a minimum of four credits of MUS 364 level*	12

Total 91

*Instrumentalists pursuing this major must enroll for three credits of MUS X71A (applied voice).

Bachelor of Arts**Music Major (5450)**

Required Courses	Credits
*Music Core Requirements.....	36
**MUS X71/64, Applied Instruction	10
MUS 343, Counterpoint I.....	3
OR MUS 440, Analysis of 20th Century Music (3)	
MUS 359, 379, 382, 382, 385, 386 (pick any 2)	6
Appropriate Major Ensemble	6
MUS 495, Senior Project.....	2
***Music Electives	6

Total 69

*MUS 342 (Conducting II) is not required as part of this major

**Must include at least two quarters of MUS 264
***Selective credits should represent an area of concentration that relates to the Senior Project chosen. Suggested areas include performance, composition, theory, history and jazz studies.

Music Minor (5450)

Required Courses	Credits
MUS 144, 145, 146, First-year Theory.....	9
MUS 104, Introduction to Musical Studies ..	3
Ensemble (large ensemble or chamber ensemble).....	6
MUS 379, Philosophy of Music OR MUS 359, Survey of Music in Cross- Cultural Perspectives.....	3
MUS X71 or X64, Applied Music.....	6
Music electives	6

Total 33

MUS 154A I, II and III (Class Piano) may be used to satisfy both co-requisite requirements for MUS 144, 145 and 146 and elective requirements.

Music Courses

Performance activities are designated by the following code:

- A. Piano
- B. Voice
- C. Strings
- D. Woodwinds
- E. Brass
- F. Organ
- G. Percussion
- H. Guitar
- I. Recorder
- K. Harpsichord
- L. Mixed

MUS 101. History of Jazz (5). The evolution of jazz and the development of Black music in White America.

MUS 102. Introduction to Music (5). Fundamental musical concepts (melody, harmony, rhythm, form, etc.) through illustrations of the instrumental and vocal music of major composers from the earliest period through the present day.

MUS 104. Introduction to Musical Studies (3). Attitudes and concepts relevant to the music profession. Listening repertoire and reference materials. Designed for entering Music majors.

MUS 120. Composition (1). Prerequisite, Departmental acceptance as theory/composition major or permission of instructor. Beginning study in composition. May be repeated for a total of three credits.

MUS 143. Introduction to Music Theory (3). Introduction of fundamental music theory: scales, keys, meter and rhythm, triads, ear-training, and keyboard fundamentals. Course is designed for non-majors seeking basic musical skills, and for music majors with limited theoretical backgrounds. Does not count towards a Music degree.

MUS 144, 145, 146. First-year Theory (3,3,3). Prerequisites, Students must be concurrently enrolled in MUS 154A (Class Piano I), or demonstrate equivalent proficiency, or by permission of Department Chair. Courses must be taken in sequence. The melodic, rhythmic, and harmonic elements of music through ear-training, sight-singing, writing, analysis, and keyboard work. Two hours lecture and two hours laboratory per week.

MUS 154. Class Instruction (1). Each course prerequisite to the next numeral. (A.) Piano I, II, III; (B.) Voice I, II; (H.) Guitar I, II. May be repeated for credit.

MUS 164. Major Applied Area (Individual Instruction) (1, 2 or 4). By permission of

instructor. May be repeated for credit. One half-hour lesson per week for 2 credits, one hour lesson per week for 4 credits; 1 credit if offered one term only during summer session. All students enrolled in performance must attend the weekly recital hour, 7th period, Tuesdays. Instruction available in performance areas A-I, K.

MUS 171. Secondary Applied Area (Individual Instruction) (1). Prerequisite, Permission of instructor. One credit any quarter, may be repeated. Private study on instruments secondary to a student's major performance area. Intended particularly for beginning students who wish to develop additional skills on an instrument or in voice to enrich their total music background. Instruction available in performance areas A-I, K.

MUS 198. Special Topics (1-6).

MUS 210. Vocal Jazz Choir (1). By permission of instructor. May be repeated for credit. Must attend all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 211. Women's Choir (1). May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. For freshmen and sophomores. By permission of instructor.

MUS 213. Flute Choir (1). Previous experience in flute performance and permission of instructor. May be repeated for credit. Two hours of rehearsal per week plus all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 214. Brass Choir (1). By permission of instructor. May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 215. Chamber Orchestra (1). By permission of instructor. May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 217. Chamber Music Ensemble (1). By permission of instructor. May be repeated for credit. One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A-I, K, L.

MUS 220. Composition (2). Prerequisite, a minimum of three credits in MUS 120 or permission of instructor. Intermediate study in composition. May be repeated for a total of 6 credits.

MUS 228. Men's Choir (1). May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. For freshman and sophomores. By permission of instructor.

MUS 229. Percussion Ensemble (1). By permission of instructor. May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 230. Diction in Singing Foreign Languages (3). Covers Italian, French, and German pronunciation for the undergraduate voice student.

MUS 232. Stage Band (1). By permission of instructor. May be repeated for credit. Must attend all scheduled rehearsals and performances. For freshmen and sophomores.

MUS 235. Laboratory Choir (1). By permission of instructor. May be repeated for credit. Two hours rehearsal per week plus all scheduled rehearsals and performances. Open to all students to participate as singers.

MUS 244, 245, 246. Second-year Theory (3,3,3). Prerequisites, MUS 146, 154A (Class Piano III, or equivalent proficiency), or permission of Department Chair. Courses must be taken in sequence. 20th-century musical resources.

MUS 253C. Class Instrumental Methods Strings I (1). Lower Strings (Cello and bass). Techniques and methods in applied instruction for Music Education.

MUS 253D. Class Instrumental Methods Woodwinds I (1). Lower Woodwinds (single reeds). Techniques and methods in applied instruction for Music Education.

MUS 253E. Class Instrumental Methods Brass I (1). Lower Brass (Trombone and Tuba). Techniques and methods in applied instruction for Music Education.

MUS 253G. Class Instrumental Methods Percussion I (1). Techniques and methods in applied instruction for Music Education.

MUS 254C. Class Instrumental Methods Strings II (1). Upper Strings (Violin and Viola). Techniques and methods in applied instruction for Music Education.

MUS 254D. Class Instrumental Methods Woodwinds II (1). Upper Woodwinds (Flute). Techniques and methods in applied instruction for Music Education.

MUS 254E. Class Instrumental Methods Brass II (1). Upper Brass (Horn and Trumpet). Techniques and methods in applied instruction for Music Education.

MUS 254G. Class Instrumental Methods Percussion II (1). Techniques and methods in applied instruction for Music Education.

MUS 255. Keyboard Harmony and Improvisation (1). Prerequisite MUS 254 or permission of instructor. Designed for instrumental, choral, and studio teachers providing practical and working knowledge of keyboard harmony, chord

- voicing, bass line construction, and improvisation. Particularly applicable to jazz and pop idioms.
- MUS 261. Opera Workshop (1).** A class leading to the performance of scenes, single acts from opera. May be repeated for credit. By permission of instructor.
- MUS 262. Opera Performance (1).** A class leading to performance of a complete opera. May be repeated for credit. By permission of instructor.
- MUS 264. Major Applied Area (Individual Instruction) (1, 2 or 4).** Instruction available in performance areas A-I, K.
- MUS 266. Wind Ensemble (1-2).** May be repeated for credit. Open to students with demonstrated proficiency on band instruments by audition or permission of the instructor. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session.
- MUS 267. Choir (1-2).** May be repeated for credit. Open to all students by audition. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session.
- MUS 268. Chamber Choir (2).** May be repeated for credit. Open to all students by audition. Three hours rehearsal per week plus all scheduled rehearsals and performances.
- MUS 271. Secondary Applied Area (Individual Instruction) (1).** Prerequisite, permission of instructor. One credit any quarter, may be repeated. Private study on instruments secondary to a student's major performance area. Intended particularly for intermediate students who wish to develop additional skills on an instrument or in voice to enrich their total music background. Instruction available in performance areas A-I, K.
- MUS 277. Orchestra (1-2).** May be repeated for credit. Open to all students proficient on orchestral instruments by permission of director. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session.
- MUS 287. Marching and Concert Band (2)** Fall quarter only. May be repeated for credit. Five hours rehearsal per week plus all scheduled rehearsals and performances. This band functions as a marching band and is organized into a concert band at completion of the football season. For freshmen and sophomores.
- MUS 288. Symphonic Band (2)** Winter and spring quarters only. Five hours rehearsal per week plus scheduled rehearsals and performances. During winter and spring quarters the symphonic band will present several formal concert programs. May be repeated for credit. For freshmen and sophomores.
- MUS 292. Accompanying Practicum (1-3).** May be repeated for credit. By assignment of instructor. Minimum three hours rehearsal weekly per credit plus performances. For freshmen and sophomores.
- MUS 296. Individual Study (1-6).** Prerequisite, permission of instructor. May be repeated.
- MUS 298. Special Topics (1-6).**
- MUS 299. Seminar (1-5).** May be repeated.
- MUS 304. Introduction to Musical Studies for Transfer Students (2).** 1. An introduction to the techniques of research in music; 2. A brief survey of concepts in World Music.
- MUS 320, Composition (2).** Prerequisite: a minimum of 6 credits in MUS 220 or permission of the instructor. Advanced study in composition. May be repeated for a total of 6 credits.
- MUS 322. Basic Music Skills for Teachers (2).** For the general classroom teacher (not for music majors or minors). Basic theory; development of the singing voice and ability to play accompanying instruments.
- MUS 323. Choral Music Education (3).** Prerequisite, MUS 341. Philosophy, methods and materials. Individual research and presentation of teaching unit in class.
- *MUS 325. Instrumental Music Education (3).** Prerequisite, suitable conducting and performance skill in piano or instrument. Philosophy and psychology of music education through methods and materials; observation of teachers in the rehearsal, individual research.
- *MUS 326. Music in the Classroom (3).** For the general classroom teacher. (Not for music majors or minors.) Techniques used in helping children to develop musically through singing, rhythmic activities, creative activities, listening, and playing instruments.
- *Enrollment is subject to you being fully admitted to the Teacher Education Program. If you register and are not admitted, you will be dropped. You will be required to present your orange "Admit to Teacher Education Program" card on the first day of your attendance in class.
- MUS 329. General Music Methods (4).** Prerequisite, MUS 146. Materials, methods, and instructional techniques for general music, grades K-12.
- MUS 340. Analytical Techniques I (3).** Prerequisites, MUS 246, 282, keyboard proficiency requirements. Analysis of the structure of tonal music.
- MUS 341. Conducting I (3).** Prerequisite, MUS 146. Open to Music majors and minors only. Fundamental principles of baton techniques, practical experience in conducting.
- MUS 342. Conducting II (3).** Prerequisite, MUS 341. A continuation of MUS 341, conducting literature of junior-senior high school performing groups.
- MUS 343. Counterpoint I (3).** Prerequisite, MUS 244. Independent melodic line, harmonic background, motive structure and two-point counterpoint as practiced by the composers of the 18th and 19th centuries. Written exercises and analysis.
- MUS 344. Theory Review (3).** Prerequisite, MUS 246. A complete review of traditional harmony from rudiments of music through chromatic harmony.
- MUS 346. Counterpoint II (3).** Prerequisites, MUS 343. Three-voice counterpoint, imitation in three voices, the three-voice invention, and the trio sonata.
- MUS 347. Electronic Music (2).** Prerequisite, MUS 246 or permission of instructor. Study of contemporary technologies and techniques as used to compose music. May be repeated for credit.
- MUS 355. Jazz Improvisation (3).** Prerequisites, MUS 246, MUS 255, or permission of instructor. Basic jazz improvisational techniques for upper division wind instruments, percussion (mallet), guitar, acoustic bass and keyboards who have demonstrated proficiency on their applied instrument as well as basic jazz keyboard skills.
- MUS 356. Jazz Styles (3).** Prerequisite, MUS 355 or permission of instructor. Overview of jazz history as it has impacted the evolution of instrumental jazz styles. Class activities include transcription and performance of recorded improvisations in an imitative style.
- MUS 357. Jazz Composition and Arranging (3).** Prerequisites, MUS 355 and MUS 356. Development of skills in songwriting, melody and chord progression, construction, and arranging in the jazz idiom through student projects and score analysis.
- MUS 358. Commercial Songwriting (1).** Prerequisites, MUS 246, MUS 255, or permission of instructor. Theoretical and formal analysis of popular songs, ear training and creative exercises in popular music composition. Two hours laboratory per week.
- MUS 359. Survey of Music in Cross-Cultural Perspectives (3).** An introduction to ethnomusicology: the cultural context of music with emphasis on Africa, Asia, Native North and South America, Oceania. MUS 359 and ANTH 359 are equivalent courses. Students may not receive credit for both.

- MUS 364. Major Applied Area (Individual Instruction)** (1,2, or 4). Instruction available in performance areas A-I, K.
- MUS 365. Advanced Keyboard Skills** (2). Prerequisites, MUS 264 and permission of instructor. Laboratory instruction designed to include skills such as sight reading, accompanying, harmonization, score reading, and ensemble playing. May be repeated for credit.
- MUS 371. Secondary Applied Area (Individual Instruction)** (1). Prerequisite, permission of instructor. One credit any quarter, may be repeated. Private study on instruments secondary to a student's major performance area. Intended particularly for advanced students who wish to develop additional skills on an instrument or in voice to enrich their total music background. Instruction available in performance areas A-I, K.
- MUS 372. Music History to 1600** (4). Prerequisites, MUS 104, 146, 154A (Class Piano III, or equivalent proficiency. Formerly MUS 280. Students may not receive credit for both.
- MUS 373. Music History, 1600 to 1800** (4). Prerequisites, MUS 244, 372. Formerly MUS 281. Students may not receive credit for both.
- MUS 374. Music History, 1800 to the Present** (4). Prerequisites, MUS 245, 373. Formerly MUS 282. Students may not receive credit for both.
- MUS 379. Philosophy of Music** (3). Great music as a source of insights into human beings and the world. MUS 379 and PHIL 379 are equivalent courses. Students may not receive credit for both.
- MUS 380. Music History Review** (3). A review of the material presented in the required undergraduate music history sequence. Specifically intended for graduate students. The final exam will be equivalent to the graduate music history diagnostic examination. May not be used to satisfy upper-division undergraduate or graduate degree requirements. Required for graduate students not passing Music History diagnostic test. Grade will be S or U.
- MUS 382. Survey of Chamber Music** (3). Prerequisite, MUS 372.
- MUS 383. Survey of Symphonic Music** (3). Prerequisite, MUS 372.
- MUS 384. Survey of Choral Music** (3). Prerequisite, MUS 372.
- MUS 385. Survey of Opera** (3). Prerequisite, MUS 372.
- MUS 386. Survey of 20th Century Music** (3). Prerequisite, MUS 372.
- MUS 398. Special Topics** (1-6).
- MUS 410. Vocal Jazz Choir** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 210 for description.
- MUS 411. Women's Choir** (1).
- MUS 413. Flute Choir** (1). Previous experience in flute performance and permission of instructor. May be repeated for credit. Two hours of rehearsal per week plus all scheduled rehearsals and performances. For juniors and seniors.
- MUS 414. Brass Choir** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 214 for description.
- MUS 415. Chamber Orchestra** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 215 for description.
- MUS 417. Chamber Music Ensemble** (1). By permission of instructor. May be repeated for credit. One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A-I, K, L.
- MUS 420. Composition** (3). Prerequisite: a minimum of 6 credits in MUS 320 or permission of the instructor. May be repeated.
- MUS 422A. Orchestration** (3). Prerequisites, MUS 246, 282, keyboard proficiency requirements. Instrumentation. Formerly MUS 422.1.
- MUS 422B. Orchestration** (3). Prerequisite, MUS 422A. Scoring for woodwind, brass, string and percussion ensembles. Introduction to keyboard transcription. formerly MUS 422.2.
- MUS 422C. Orchestration** (3). Prerequisite, MUS 422B. Scoring for full orchestra. Transcriptions of keyboard music. Score analysis. Formerly MUS 422.3.
- MUS 424. Jazz Music Education** (3). Prerequisite, Admittance into the Teacher Education Program and completion of two-year theory sequence or permission of the instructor. Course is designed to give music educators the tools and knowledge to direct a jazz program in a public school setting.
- MUS 425. Pedagogy (Studio)** (3). Prerequisite, permission of instructor. Teaching methods and materials. Instruction available in performance areas A-H.
- MUS 426. Literature (Studio)** (3). Prerequisite, permission of instructor. Literature related to the specific applied area for teaching and performance purposes. Instruction available in performance areas A-H.
- MUS 428. Men's Choir** (1).
- MUS 429. Percussion Ensemble** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 229 for description.
- MUS 432. Stage Band** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 232 for description.
- MUS 435. Laboratory Choir** (1). By permission of instructor. May be repeated for credit. For juniors and seniors. See MUS 235 for description.
- MUS 440. Analytical Techniques II** (3). Prerequisite, MUS 340. Emphasis on 20th Century music, including contemporary extrapolations from Schenker's methods, pitch class and parametric analysis techniques.
- MUS 441. Conducting III** (3). Prerequisite, MUS 342. A continuation of Conducting II with emphasis on score reading and rehearsal techniques.
- MUS 444. Canon and Fugue** (3). Prerequisite, MUS 346. Invertible counterpoint, canonic devices, fugal procedures.
- MUS 453. Musical Direction of Broadway Musicals** (3). Prerequisites, permission of instructor and MUS 246 or equivalent. Techniques and methods of musical direction of Broadway musicals for the secondary school teacher. Choosing a work, preparing rehearsals, making a schedule, working with singers. MUS 453 and MUS 553 are equivalent courses. Students may not receive credit for both.
- MUS 461. Opera Workshop** (1-2). A class leading to the performance of scenes or single acts from opera. May be repeated for credit. By permission of instructor.
- MUS 462. Opera Production** (1-2). A class leading to performance of a complete opera. MUS 462 and MUS 562 are equivalent courses. May be repeated for credit. By permission of instructor.
- MUS 464. Major Applied Area (Individual Instruction)** (1, 2 or 4). Instruction available in performance areas A-I, K.
- MUS 466. Wind Ensemble** (1-2). By permission of the instructor. May be repeated for credit. See MUS 266 for description. For juniors and seniors. One credit if offered one term only during summer session.
- MUS 467. Choir** (1-2). May be repeated for credit. Open to all students by audition. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session.
- MUS 468. Chamber Choir** (2). May be repeated for credit. See MUS 268 for complete description.
- MUS 477. Orchestra** (1-2). May be repeated for credit. Open to all students proficient on orchestral instruments by permission of director. Five hours rehearsal per week plus all scheduled rehearsals and performances. One credit if offered one term only during summer session.

MUS 480. Reed Making for Double Reed Instruments (1).

MUS 481. Instrument Repair (1). Reed, woodwind, string and percussion, minor repairs.

MUS 482. Music Business (3). Prerequisites, MUS 372 and 10 credits of business requirements or permission of the instructor. A survey and overview of the business of music including licensing, copyright, production, management, marketing and arts administration.

MUS 484. Band Arranging I (3). Prerequisites, MUS 246, 372 and keyboard proficiency fulfillment. For public school band directors; full band orchestration, small bands, including marching groups.

MUS 485. Choral Arranging (3). Course will focus skills needed to write and arrange music junior and senior high school vocal ensembles.

MUS 486. Stage Band Arranging (3). Prerequisite, MUS 246 and keyboard proficiency fulfillment. For public school band directors; full band orchestration, small bands, including marching groups.

MUS 487. Marching and Concert Band (2). Fall quarter only. See MUS 487 for description. For juniors and seniors. May be repeated for credit.

MUS 488. Symphonic Band (2). Winter and spring quarters only. See MUS 288 for description. May be repeated for credit. For juniors and seniors.

MUS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

MUS 491. Workshop or Clinic (1-6).

MUS 492. Accompanying Practicum (1-3). May be repeated for credit. By assignment of instructor. Minimum three hours rehearsal weekly per credit plus performances. For juniors and seniors.

MUS 495. Senior Project (2). Students are required, as a senior project, to present a recital, composition, or piece of research.

MUS 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

MUS 497. Honors (1-12). Prerequisite, admission to department honors program.

MUS 498. Special Topics (1-6).

MUS 499. Seminar (1-5). May be repeated.

Music Foreign Studies Courses

MFST 220. Second Year Composition (1-3). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

MFST 320. Third Year Composition (1-3). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

MFST 364. Applied Performance A (2-4). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

MFST 420. Fourth Year Music Composition (1-3). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

MFST 443. Advanced Theory (3). Offered only in study abroad programs. May be repeated for credit.

MFST 464. Applied Performance B (2-4). Offered only in study abroad programs. course must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

MFST 489. Ensemble Performance (2). Offered only in study abroad programs. Courses must be taken in sequence, although a student may enroll in more than one at a time. May be repeated for credit.

Undergraduate Courses/Programs on Reserve

The following courses/programs are on reserve and may be offered subject to program needs: MUS 221. Suzuki Pedagogy I (3); MUS 222. Suzuki Pedagogy II (3); MUS 228. Men's Glee Club (1); MUS 234. Central Swingers (1); MUS 289. Pep Band (1); MUS 293. String Practicum (3); MUS 395. Suzuki Pedagogy: Practicum (2); MUS 428. Men's Glee Club (1); MUS 489. Pep Band (1).

OCCUPATIONAL EDUCATION

Faculty

Jan Bowers, Family and Consumer Science
Bob Lupton, Information Technology and Administration Management
V. Wayne Klemin, Information Technology and Administration Management
Bob Wieking, Industrial Education Technology

Vocational-Technical Education Competency Certificate Program

Individuals entering teaching in approved vocational-technical programs on the basis of their business or industry work experience are required to demonstrate performance of the general standards for all vocational-technical teacher certificate candidates pursuant to WAC 180-77-041.

Career and Technical Education Teacher Preparation Certificate

This two-year competency block certificate program is intended for business or industry professionals who are interested in obtaining a Career and Technical teaching certificate. The program will provide the tools necessary for success in the classroom. During the program participants will complete a mentored teaching experience or practicum each year. The program is offered through the Office of Continuing Education in collaboration with Occupational Education. www.cwuce.org/careertech

Prerequisites:

1. Current Career and Technical Education Probationary Teaching Certificate OR
2. 6000 hours paid occupational experience in the area you wish to teach, and fingerprint clearance from both the Washington State Patrol and the FBI must be on file at OSPI.
3. Successful completion of all three sections in the Washington Educator Skills Test – Basic (West-B). Test scores must be submitted prior to completing the program in order to receive CWU's recommendation for career and technical education teacher certification OR Washington State Residency Permit or professional teacher certification.

Required Courses	Credits
Block 1:	
OCED 310A. Vocational-Technical Teaching Methods	4
OCED 310B. Vocational-Technical Occupational Analysis	3
OCED 310C. Vocational-Technical Course Organization and Curriculum Design .	5

Block 2:

- OCED 311A. Vocational-Technical Coordination Techniques of Cooperative Education. 3
- OCED 311B. Vocational-Technical History and Philosophy of Vocational Education 3
- OCED 311C. Vocational-Technical Student and Professional Leadership Development. 4
- OCED 311D. Vocational-Technical School and Issues Related to Abuse. 2

Total 24

Included in each year of the program is a 70 hour practicum. Passing grades in all courses grants the individual the competencies in General and Specific Safety requirement.

Occupational Education Courses

- OCED 310A. Vocational-Technical Teaching Methods (4). An introduction to teaching pedagogy and application of occupational skills, knowledge and practice to a vocational classroom setting.
- OCED 310B. Vocational-Technical Occupational Analysis (4). An introduction to teaching pedagogy and application of occupational skills, knowledge and practice to a vocational classroom setting.
- OCED 310C. Vocational-Technical Course Organization and Curriculum Design (4). An introduction to teaching pedagogy and application of occupational skills, knowledge and practice to a vocational classroom setting.
- OCED 311A. Vocational-Technical Coordination Techniques of Cooperative Education (2). Advanced teaching pedagogy, history and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.
- OCED 311B. Vocational-Technical History and Philosophy of Vocational Education (4). Advanced teaching pedagogy, history and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.
- OCED 311C. Vocational-Technical Student and Professional Leadership Development (4). Advanced teaching pedagogy, history and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.
- OCED 311D. Vocational-Technical School Law and Issues related to Abuse (2). Advanced teaching pedagogy, history and philosophy of vocational education, school law and issues related to abuse, leadership, and work-based learning.
- OCED 410. Vocational School to Work Programs (4). Prerequisite, admission to the teacher education program. Work-

based learning, student leadership, advisory committees, program promotion, and professional responsibilities in vocational education.

- OCED 432.. Occupational Analysis (3). Analysis of jobs and trades to determine related technical information, skills and advisory sources necessary to develop content materials for a course of study. Formerly IET 432. Students may not receive credit for both.
- OCED 440. Total Quality Learning (3). Concepts of continuous improvement cycles, statistical process control tools, assessment strategies and tools. Application strategies and learning and behavior concepts of Glasser, Maslow, Herzberg, and Bloom.
- OCED 492. Practicum (3-15). Prerequisite permission of Department Chair. Grading will be S/U.

PHILOSOPHY

Faculty

Chair: Chenyang Li
Language and Literature Building 337

Professors

- Peter M. Burkholder, Ethics, Epistemology, Modern Philosophy
- Webster F. Hood, Existentialism, Existentialism, Phenomenology, 19th Century and Contemporary Philosophy
- Chenyang Li, Asian Philosophy, Comparative Philosophy, Ethics, and Philosophy of Language

Assistant Professors

- Cynthia Coe, Continental Philosophy, Feminist Philosophy
- Jeffrey Dippmann, Asian Religion and Philosophy, World Religions, Chinese Religion, Buddhist and Taoist Philosophy,
- Heidi Szpek, Hebrew Bible, Western Religious Traditions, World Religions, Ancient Studies and the Bible

Lecturers

- Matthew Altman
- Sharon Connors
- Karen Gerrer
- Kristin Klamm-Doneen
- Gayle Young-Dohrman

Emeritus Professors

- Jay E. Bachrach
- Robert Goedecke
- Raeburne S. Heimbeck
- Chester Z. Keller
- John Utzinger

General Departmental Information

The original meaning of the word philosophy is "the love of wisdom." As such it represents not a body of doctrines to be learned but an ongoing process of critical and speculative inquiry into questions which represent people's deepest concerns, such as the meaning of human existence, the nature of reality, the justifications of human knowledge, and the search for the grounds of human conduct.

The Department of Philosophy has three main objectives. 1. To acquaint general education students with the basic questions which have concerned philosophers over the past 2,500 years and to give them some skills and methods for developing their own answers to these questions. 2. To offer service courses for students in other disciplines, such as the social sciences, history, speech, science, etc. 3. To teach students who have elected Philosophy as their major.

Students majoring in Philosophy, or in the Philosophy Religious Studies specialization, must complete an end-of-major assessment. They should consult their major advisor about this assessment at least three quarters before finishing their work for the major.

Bachelor of Arts

Philosophy Major

45-59 credits (6045)

60 credits (6050)

Students may choose either a 45-59 credit major (6045) or a 60 credit major (6050). In order to graduate, a student who completes the 45-59 credit major must also have a minor or second major in another discipline. A student who completes the 60 credit major is not required to have a minor or second major.

Required Courses

Credits

- *PHIL 201, Introduction to Logic.....5
- PHIL 302, Ethics5
- PHIL 352, Western Philosophy I.....5
- PHIL 353, Western Philosophy II5
- PHIL 354, Western Philosophy III5
- PHIL 355, Contemporary Thought5
- PHIL 494, Undergraduate Thesis Preparation2
- PHIL 495, Undergraduate Thesis3
- PHIL 499, Seminar5
- Philosophy electives.....5-20
- 45-59 credit major (5-19 credits)
- 60 credit major (20 credits)

Select from all other PHIL courses

Total 45-60

*If a student uses PHIL 201, Introduction to Logic, to satisfy the basic requirement for general education, he/she may not include it in the Philosophy major. He/she should substitute an additional five credit elective for it.

Religious Studies Specialization**50-59 credits (6055)****60 credits (6060)**

The Religious Studies specialization is a path of inquiry into the nature of religion, its pervasive role in human life, and its contribution to understanding human existence and destiny. This study of religion is set in a frame of philosophy courses; thus the student will graduate with a major in Philosophy with a specialization in Religious Studies. In addition, the student may range into other disciplines to see the practices and influences of religion in various fields of human culture. Some courses in other academic departments are suggested below.

The major provides a liberal education of an interdisciplinary yet focused character. It, as well as the minor, combines well with another major in the humanities or in the social sciences. The student is also prepared for graduate work in the humanities, social sciences, or religious studies itself, as well as for employment in the religious and social science fields.

Students who specialize in Religious Studies may choose either a 50-59-credit specialization (6055) or a 60-credit specialization (6060). In order to graduate, a student who completes the 50-59-credit specialization must also have a minor or second major in another discipline. A student who completes the 60-credit specialization is not required to have a minor or second major.

Required Courses	Credits
RELS 101, Introduction to Religion.....	5
RELS 201, Sacred Books of the World.....	5
RELS 301, Man in Religious Thought.....	5
RELS 351, Religions of Asia.....	5
RELS 353, Judaism, Christianity, Islam.....	5
RELS 488, Senior Seminar.....	5
Select from the following:	10-20
PHIL 351, Medieval Philosophy (5)	
PHIL 352, Western Philosophy I (5)	
PHIL 353, Western Philosophy II (5)	
PHIL 354, Western Philosophy III (5)	
Select from the following:	5-10
PHIL 310, Philosophies of India (5)	
PHIL 445, Chinese Philosophy (5)	
Select from the following:	5-20
PHIL 302, Ethics (5)	
PHIL 305, Philosophy of Religion (5)	
PHIL 359, Mysticism (5)	
PHIL 376, Contemporary Religious Thought (5)	
*Electives.....	0-25
50-59-credit specialization (0-9 credits)	
60-credit specialization (10-25 credits)	

Total 50-60

*Electives may be selected from any upper division philosophy or religious studies course. Students may strengthen their preparation by taking additional upper division courses from anthropology, art, English, history, music, political science, or sociology. See Department for a complete listing of approved upper division electives.

Philosophy Minor (6050)

Required Courses	Credits
PHIL 101, Introduction to Philosophy.....	5
*PHIL 201, Introduction to Logic.....	5
Philosophy electives.....	10-18
Select from PHIL courses; at least 10 credits at 300 level or above.	

Total 20-28

*If a student uses PHIL 201, Introduction to Logic, to satisfy the basic requirement for general education, he/she may not include it in the Philosophy minor. He/she should substitute an additional five credit elective for it.

Religious Studies Minor (6800)

Required Courses	Credits
RELS 101, Introduction to Religion.....	5
RELS 201, Sacred Books of the World OR RELS 301, Man in Religious Thought OR PHIL 305, Philosophy of Religion.....	5
RELS 351, Religions of Asia OR RELS 353, Judaism, Christianity, Islam..	5
Department-approved electives	5

Total 20**Philosophy Courses**

Some advanced philosophy courses are seldom offered except by arrangement.

- PHIL 101. Introduction to Philosophy (5).** Introduction to the basic themes, thinkers and topics of philosophy. The mind-body problem, good versus evil, knowledge, truth, goodness, and beauty.
- PHIL 115. The Meaning of Life (5).** Original sources from diverse philosophical traditions explore various responses to the question of the meaning of life, considering the most significant human aspirations and values.
- PHIL 201. Introduction to Logic (5).** Formal principles, methods and techniques for analyzing, constructing, and evaluating arguments. Topics include validity, soundness, truth tables, Venn diagrams, syllogisms, and logical symbolism.
- PHIL 202. Introduction to Ethics (5).** Examine some main traditions of ethics, such as Christian ethics, Buddhist ethics, Confucian ethics, ethical absolutism and relativism, utilitarianism, deontology, and feminist ethics.
- PHIL 209. Introduction to Asian Philosophy (5).** Examination of important problems and classical texts in Indian, Chinese, and Japanese philosophy.
- PHIL 210. Current Ethical Issues (5).** Contemporary ethical theories from diverse traditions applied to current ethical problems. Recent ethical approaches to euthanasia, abortion, capital punishment, affirmative action, and environmental concerns.

PHIL 298. Special Topics (1-6).**PHIL 299. Seminar (1-5).**

PHIL 302. Ethics (5). Man as moral agent; nature of moral decision; ethical theories; their relevance to moral practice.

PHIL 303. Aesthetics (5). Aesthetic object and its qualities, the aesthetic experience, and evaluation of works of art.

PHIL 304. Business Ethics (5). Ethical problems that arise in contemporary business practices and the relevance of recent ethical theory to these problems.

PHIL 305. Philosophy of Religion (5). Fundamental assumptions and issues in religious activity and thought; types of religious philosophy.

PHIL 306. Environmental Ethics (5). An examination of various positions on the human relationship with the natural environment, from ancient and contemporary, western and non-western, as well as interdisciplinary perspectives.

PHIL 308. Philosophy of Ecology (5). Philosophical issues pertaining to the maintenance and enhancement of ecosystems.

PHIL 310. Philosophies of India (5).

PHIL 312. Applied Logic (5). Principles of sound reasoning in practical human situations.

PHIL 348. Social and Political Philosophy (5). An examination of the philosophical foundations of major modern social and political systems - classical conservatism, liberalism, socialism, fascism, anarchism.

PHIL 351. Medieval Philosophy (5). Latin, Arabic and Jewish traditions.

PHIL 352. Western Philosophy I (5). Origins through Plato, Aristotle and Plotinus.

PHIL 353. Western Philosophy II (5). A study of some of the influential philosophies of the 17th and 18th centuries; Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume and Kant.

PHIL 354. Western Philosophy III (5). 19th, early 20th century. Hegel, Schopenhauer, Mill, Marx, Nietzsche, Kierkegaard and Bergson.

PHIL 355. Contemporary Thought (5). 20th century; James, Russell, Whitehead, Dewey, Ayer, Sartre and Jaspers.

PHIL 356. American Philosophy (5). Colonial period to the present.

PHIL 357. Race, Class, and Gender in American Philosophy (5). An examination of historical and contemporary American writings that address race, ethnicity, class, gender and sexual orientation from philosophical perspectives, emphasizing material usually excluded from the accepted philosophical canon.

PHIL 358. Existentialism (5). Kierkegaard, Nietzsche, Marcel, Heidegger, Jaspers and Sartre.

- PHIL 359. Mysticism (5).** An analysis of the strange and the uncanny in human experience, and of the attendant claims regarding the transcendent implications of these phenomena.
- PHIL 360. Introduction to Symbolic Logic (5).** Principles, methods and techniques of modern logic. The propositional calculus, truth tables, methods of proof and an introduction to some higher-order functional calculi.
- PHIL 362. Continental Rationalism (5).** Descartes, Spinoza and Leibniz.
- PHIL 363. British Empiricism (5).** Locke, Berkeley and Hume.
- PHIL 372. Philosophy of Technology (5).** A critical examination of the dimensions of technology: the nature of tools and machines, the distinction between pure and applied research, artificial intelligence, and the emergence of the industrial state as a political unit.
- PHIL 376. Contemporary Religious Thought (5).** An examination of recent and contemporary writings which reflect the "religious condition" in contemporary Western culture. Readings will be chosen from such writers as Nietzsche, Kierkegaard, Freud, Marx, Sartre, Marcel, Buber, Bonhoeffer, Maritain, Dewey, the Niebuhrs, Tillich, Whitehead and Teilhard de Chardin.
- PHIL 378. Philosophy of Love (5).** A study of various concepts of love as they occur in philosophy, literature, and other cultural expressions. The nature of romantic love, eros, agape, friendship, and fellow feeling will be discussed.
- PHIL 379. Philosophy of Music (3).** Great music as a source of insights into human beings and the world. PHIL 379 and MUS 379 are equivalent courses. Students may not receive credit for both.
- PHIL 398. Special Topics (1-6).**
- PHIL 420. Kant (5).**
- PHIL 445. Chinese Philosophy (5).** Selected philosophical topics in classical Chinese literature.
- PHIL 450. Philosophy of History (5).** Nature of historical inquiry. Representative interpretations of history.
- PHIL 459. Phenomenology (5).** A historical and critical study of phenomenology as a philosophic method. Leading phenomenologists such as Husserl, Scheler, and Merleau-Ponty.
- PHIL 461. Theory of Knowledge (5).** Evidence, perception and the physical world, a priori knowledge, meaning, the analytic-synthetic distinction, theories of truth.
- PHIL 463. Philosophy of Mind (5).** Philosophical implications of recent approaches to mind.
- PHIL 465. Advanced Ethics (5).** Contemporary ethical theory. Ethical disagreement, moral truth, value concepts, moral reasoning, normative sentences.
- PHIL 470. Philosophy of Language and Communication (5).** A critical study of the nature and functions of language through analysis of concepts such as meaning, reference, truth, signs and symbols.
- PHIL 480. Philosophy of Science (5).** A critical study of the aims, structure, and methodology of the sciences. Explanation, prediction, reduction, theories, laws, and confirmation.
- PHIL 481. Philosophy of the Social Sciences (5).** A critical study of basic assumptions, distinctive methods and explanations, and value and normative considerations in the social sciences. PHIL 481 and SOC 481 are equivalent courses. Students may not receive credit for both.
- PHIL 487. Philosophy of Law (5).** Basic irrational and rational factors in social interaction with regard to maintenance of free society; history of law, different kinds of law and legal philosophy, from ancient deliberations to the present.
- PHIL 490. Cooperative Education (1-6).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- PHIL 494. Undergraduate Thesis Preparation (2).** Prerequisites, advanced standing and permission of instructor. Grade will be S or U. Formerly PHIL 4891.
- PHIL 495. Undergraduate Thesis (3).** Prerequisites, 494, Junior/Senior standing and permission of instructor. Complete thesis as part of major graduation requirements. Formerly PHIL 4892.
- PHIL 496. Individual Study (1-6).** Prerequisite, GPA of 3.0 in philosophy and a cumulative GPA of 3.0 plus approval of the instructor and Chair of the Department.
- PHIL 498. Special Topics (1-6).**
- PHIL 499. Seminar (5).** A seminar on a selected topic or figure. Prerequisites: Junior/Senior standing or permission of instructor.

Religious Studies Courses

- RELS 101. Introduction to Religion (5).** Religions of humanity through the ages. Beliefs, practices, symbols, and institutions. Human experiences and needs from which religions arise.
- RELS 201. Sacred Books of the World (5).** Comparative study of religious thought and literature from classics eastern and western: Upanishads, Bhagavad-Gita, Dhammapada, Tao Te Ching, Hebrew Bible, New Testament, Koran.
- RELS 301. Man in Religious Thought (5).** Human existence as perceived by religious thinkers, both classical and contemporary, in the Judaic, Christian, Hindu, Buddhist, Taoist and Confucian traditions.
- RELS 351. Religions of Asia (5).** Historical development of Hinduism, Buddhism, Taoism, Confucianism and Shinto from their origins to the present.
- RELS 353. Judaism, Christianity, Islam (5).** Historical development of the three dominant western religions from their origins to the present.
- RELS 363. Yoga (5).** History, philosophy, and psychology of Yoga in India, China, and America. Postures, breathing, meditation, and parallel western techniques.
- RELS 365. Meditation (5).** History, philosophy, and psychology of meditation in the Buddhist, Hindu, and Islamic traditions. New developments in secular and radical meditation. Survey and exploration of techniques.
- RELS 398. Special Topics (1-6).**
- RELS 488. Senior Seminar (5).**
- RELS 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- RELS 491. Workshop (1-6).** Task oriented approach to special topics.
- RELS 496. Individual Study (1-6).** Prerequisite, GPA of 3.0 and/or approval of the instructor and program director.
- RELS 498. Special Topics (1-6).**
- RELS 499. Seminar (3-5).**

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs:
PHIL 468. Logic (5)

Physical Education, Health Education and Leisure Services

See Health, Human Performance
and Recreation

PHYSICS

Faculty

Chair: Bruce Palmquist
Lind Hall 201
509-963-2727
www.cwu.edu/~physics

Associate Professors

Michael Braunstein, Nuclear Physics,
Astronomy
Bruce Palmquist, Science Education

Assistant Professors

David Laman, Atomic Molecular and
Optical Physics
Andrew A. Piacsek, Acoustics
Sharon L. Rosell, Nuclear Physics

General Departmental Information

Physics is a fundamental science in the sense that its ultimate goal is to understand and explain the structure of our universe. It is also a practical subject, and physicists continue to participate and contribute in many fields of human endeavor.

The Physics majors at Central emphasize the fundamental and practical nature of physics. Our students pursue the intellectual excitement of beginning to understand the structure of matter itself and the widely applicable experiences of problem solving, quantitative reasoning, and acquiring manipulative skills. Throughout our majors, stress is placed on careful development of key concepts and skills in a logical sequence, often from a historical perspective. This emphasis is intended to produce the habits of independent study and self improvement essential to success after graduation.

The particular major followed by any student will be determined by that student's own career objective. The B.A. major is for students wishing a broad liberal education with an emphasis in physics. The B.S. Physics majors are designed for individuals planning careers in physics and related technical fields or in areas where a knowledge of basic scientific principles is useful. The Physics minor is for students who want an introduction to the ideas of classical and modern physics.

All Physics majors require four quarters of

calculus, and this sequence must be started at least concurrently with PHYS 181. Thus, it is vital that prospective Physics majors consult a departmental advisor early in their careers to plan efficient schedules. Failure to do so could mean requiring an additional year to complete degree requirements.

Bachelor of Arts Physics Major (6250)

Required Courses	Credits
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
CHEM 181, 181LAB, 182, 182LAB, General Chemistry.....	10
MATH 172, 173, 272, 273, Calculus.....	20
PHYS 317, 318, Modern Physics.....	8
PHYS 331, Laboratory Practices and Techniques.....	3
PHYS 333, Modern Physics Laboratory.....	3
PHYS 381, 382, 383 Electromagnetic Theory.....	12
PHYS 495, Undergraduate Research.....	2
Department approved electives.....	6
MATH 265, Linear Algebra I.....	4

Total 83

This major satisfies the criteria for an endorsement in physics. This major qualifies students to teach physics at the high school level and the middle or junior high school levels. Students should seriously consider working toward endorsement in a second area such as biology, chemistry, earth science, general science, or mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Curriculum and Supervision Department. Students completing this program after August 31, 2005 will be required to pass the WEST-E exam for physics to receive a physics endorsement.

Bachelor of Science Physics Major (6250)

Required Courses	Credits
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
CHEM 181, 181LAB, 182, 182LAB, General Chemistry.....	10
MATH 172, 173, 272, 273, Calculus.....	20
PHYS 317, 318, Modern Physics.....	8
PHYS 331, Laboratory Practices and Techniques.....	3
PHYS 333, Modern Physics Laboratory.....	3
PHYS 342, Thermodynamics.....	4
PHYS 351, 352, Analytical Mechanics.....	6
PHYS 361, Computational Physics.....	4

PHYS 363, Physical Optics.....	4
PHYS 381, 382, 383, Electromagnetic Theory.....	12
PHYS 474, Quantum Mechanics.....	5
PHYS 495, Undergraduate Research.....	4
MATH 265, Linear Algebra I.....	4
MATH 376, Elementary Differential Equations.....	3
Department approved electives.....	5

Total 110

Students who intend to pursue graduate studies in Physics are strongly recommended to include the following courses in their electives:

MATH 377, Elementary Differential
Equations (3)
PHYS 475, Quantum Mechanics (5)

Bachelor of Science Physics Major (6252) Physics - Engineering Specialization (6252)

This is a joint five-year program leading to a degree from CWU and an Engineering degree from another institution.

Completion of the three-year program specified below will generally prepare the student to enter the third and fourth year courses of most engineering curricula, but it is solely the student's responsibility to apply and gain admission to an institution offering degrees in Engineering. Early consultation with Central's pre-engineering advisor is mandatory to ensure that specific additional requirements of particular pre-engineering curricula are also satisfied. After transfer to an accredited engineering program, completion of 26 credits of upper division engineering courses in that program, completion of Central's basic and breadth requirements, and a minimum total of 180 acceptable credits will satisfy remaining requirements for the B.S. degree at CWU with a major in Physics. It is the individual student's responsibility to submit an official transcript of the work completed after leaving CWU and to request awarding of this degree.

Required Courses	Credits
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
CHEM 181, 181LAB, 182, 182LAB, General Chemistry.....	10
MATH 172, 173, 272, 273, Calculus.....	20
PHYS 317, 318, Modern Physics.....	8
PHYS 331, Laboratory Practices and Techniques.....	3
PHYS 351, 352, Analytic Mechanics (3,3) OR IET 311, Statics (4) and MET 327, 327LAB Technical Dynamics (5).....	6-9
PHYS 381, 382, 383, Electromagnetic Theory.....	12

MATH 265, Linear Algebra I.....	4
MATH 376, Elementary Differential Equations	3
Select upper-division engineering courses in an approved engineering discipline in any accredited engineering program	26

Total 107-110

Physics Minor (6250)

Required Courses	Credits
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
PHYS 317, 318, Modern Physics	8
PHYS 333, Modern Physics Laboratory	3
MATH 172, 173, Calculus	10
Select one of the following:	3-6
PHYS 331, Laboratory Practices and Techniques (3)	
EET 312, Basic Electronics (4)	
PHYS 342, Thermodynamics (4)	
CHEM 381, Physical Chemistry (5)	
PHYS 492, Laboratory Experience in Teaching Physics AND SCED 324, Science Education in the Secondary Schools (6)	

Total 39-42

Students taking this minor to obtain a teaching endorsement can receive a teaching endorsement in physics only if the following requirements are met:

1. The student is working on an endorsement in biology, chemistry, or earth science.
2. The student passes the WEST-E exam for physics.
3. The student successfully completes SCED 324 and PHYS 492. SCED 324 requires admission to the Teacher Education Program.

Astronomy Minor (1350)

Astronomy minors may not use any courses in this minor as physics major electives.

Required Courses	Credits
PHYS 101, 101LAB and PHYS 102, Introductory Astronomy of the Solar System	9
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB, Introductory Physics OR PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
PHYS 301, Stellar Astrophysics	4
PHYS 317, Modern Physics	4
PHYS 492, Laboratory Experience in Teaching Physics OR PHYS 495, Undergraduate Research	2
MATH 172, 173, Calculus	10

Total 44

Students taking this minor to obtain a teaching endorsement can receive a teaching endorsement in physics only if the following requirements are met:

1. The student is working on an endorsement in biology, chemistry, or earth science.
2. The student passes the WEST-E exam for physics.
3. The student successfully completes SCED 324 and PHYS 492. SCED 324 requires admission to the Teacher Education Program.

Physics Courses

PHYS 101. Introductory Astronomy of Stars and Galaxies (4). An introduction to the variety of celestial objects and the phenomena associated with them. The course will also emphasize how we know and can continue to learn about the universe. The class along with PHYS 101LAB will meet for six hours per week for lectures, labs, and evening observation sessions. Must be taken concurrently with PHYS 101LAB.

PHYS 101LAB. Astronomy Laboratory (1). Labs and evening observation sessions will meet once a week. Must be taken concurrently with PHYS 101. Formerly PHYS 101.1.

PHYS 102. Introductory Astronomy of the Solar System (4). Must be taken concurrently with PHYS 101LAB. Students taking both PHYS 101 and PHYS 102 are only required to take PHYS 101LAB a single time. An introduction to the sun, planets and other components of the solar system emphasizing what we know and how we know it.

PHYS 103. Physics of Musical Sound (3). Basic physical principles of sound, of how musical instruments produce sound, and how humans hear music. Three lectures and two hours laboratory per week. Must be taken concurrently with PHYS 103LAB.

PHYS 103LAB. Physics of Musical Sound Laboratory (1). Must be taken concurrently with PHYS 103. Formerly PHYS 103.1.

PHYS 105. Processes in Physical Science - Physics (4). An introductory lecture-laboratory course in concepts of physics applicable to teaching in elementary school (K-6). Four class meetings and two hours laboratory per week. Must be taken concurrently with PHYS 105LAB.

PHYS 105LAB. Processes in Physical Science-Physics Laboratory (1). Must be taken concurrently with PHYS 105. Formerly PHYS 105.1.

PHYS 111, 112, 113. Introductory Physics (4, 4, 4). Courses must be taken in sequence. Prerequisites, high school algebra and trigonometry. A broad coverage of

physical topics including mechanics, heat, electricity and magnetism, waves, and light. Four class meetings and two hours laboratory per week. Not open to students with credit in PHYS 181, 183, 183. Must be taken concurrently with PHYS 111LAB, 112LAB 113LAB.

PHYS 111LAB, 112LAB, 113LAB. Introductory Physics Laboratory Must be taken concurrently with PHYS 111, 112, 113. Formerly PHYS 111.1, 112.1, and 113.1.

PHYS 181, 182, 183. General Physics (4,4,4). Pre or corequisites, MATH 172 (for PHYS 181) and MATH 173 (for PHYS 182). Must be taken concurrently with PHYS 181LAB, 182LAB, 183LAB. Introduction to principles of Physics using calculus. Intended primarily for students in science and engineering disciplines. PHYS 181 emphasizes kinematics, dynamics and conservation principles; 182 emphasizes rotational dynamics, macroscopic systems and wave mechanics; 183 emphasizes electromagnetic fields and related phenomena. Formerly PHYS 211, 212, 213. Students may not receive credit for both.

PHYS 181LAB, 182LAB, 183LAB. General Physics Laboratory (1,1,1). Must be taken concurrently with PHYS 181, 182, 183. Introduction to the process of science primarily through experimental investigation. Formerly PHYS 211.1, 212.1, 213.1. Students may not receive credit for both.

PHYS 296. Individual Study (1-6). Prerequisite, permission of instructor.

PHYS 298. Special Topics (1-6).

PHYS 301. Stellar Astrophysics (4). Prerequisites, PHYS 101, 101LAB, PHYS 317, MATH 173. Application of physical principles to understanding processes and phenomena associated with stars.

PHYS 317, 318. Modern Physics (4,4). Prerequisites, PHYS 113 or PHYS 183. PHYS 318 requires PHYS 317, MATH 173. In 317, students will learn about relativity, particle physics, and history of modern physics. In 318, students will learn about quantum physics and atomic structure. Formerly PHYS 314, 315, 316. Students may not receive credit for both.

PHYS 331. Laboratory Practices and Techniques (3). Prerequisite, PHYS 183. One class meeting and six hours laboratory per week.

PHYS 333, 334. Modern Physics Laboratory (3,3). Prerequisites or corequisites, PHYS 318, PHYS 331 or by permission. One class meeting and six hours laboratory per week.

PHYS 342. Thermodynamics (4). Prerequisite or corequisite, PHYS 318. The laws of thermodynamics and its application to macroscopic systems.

PHYS 351, 352. Analytical Mechanics (3,3).

Courses must be taken in sequence.
Prerequisites, PHYS 183/183LAB, MATH 273, MATH 376.

PHYS 361. Computational Physics (4).
Prerequisite, PHYS 351. Numerical methods of studying physical properties of realistic systems. FORTRAN, IMSL/MATH Library, and MATHEMATICA will be introduced.

PHYS 363. Physical Optics (4). Prerequisites, PHYS 183/183LAB, MATH 273. Three class meetings and two hours laboratory per week.

PHYS 381. Electromagnetic Theory (4). Prerequisites, PHYS 183/183LAB, MATH 273, MATH 265. PHYS 381, 382 and 383 must be taken in sequence.

PHYS 382. Electromagnetic Theory (4). Prerequisite, PHYS 381. PHYS 381, 382 and 383 must be taken in sequence.

PHYS 383. Electromagnetic Theory (4). Prerequisite, PHYS 382. PHYS 381, 382 and 383 must be taken in sequence.

PHYS 396. Individual Study (1-6). Prerequisite, permission of instructor.

PHYS 398. Special Topics (1-6).

PHYS 474, 475. Quantum Mechanics (5,5). Courses must be taken in sequence. Prerequisites, PHYS 318, 352. Methods of quantum mechanics and applications to physical systems. Examples from nuclear, atomic and molecular physics. Formerly PHYS 471, 472, 473. Students may not receive credit for both.

PHYS 481. Topics in Contemporary Physics (1). Prerequisite, permission of instructor. May be repeated for credit.

PHYS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

PHYS 491. Workshop (1-6). Prerequisite, permission of instructor.

PHYS 492. Laboratory Experience in Teaching Physics (2). Prerequisite, permission of instructor. May be repeated for a total of six credits. Formerly PHYS 393.

PHYS 495. Undergraduate Research (2). Prerequisite, permission of instructor. May be repeated for a total of 12 credits. Formerly PHYS 494.

PHYS 496. Individual Study (1-6). Prerequisite, permission of instructor.

PHYS 498. Special Topics (1-6).

PHYS 499. Seminar (1). May be repeated for credit.

POLITICAL SCIENCE

Faculty

Chair: Jim Brown
Psychology Building 414

Professors

Jim Brown, Political Thought, Middle East Politics, Russian Politics, American Political Culture

Michael A. Launius, Comparative Politics, Asian Politics, International Political Economy, International Politics

Rex Wirth, Public Administration and Public Policy, International Politics, Western Europe

Bang-Soon Yoon, Comparative Politics, Public Policy, Women and Politics, Korean Politics, Political Development

Associate Professor

Todd M. Schaefer, American Politics, Public Opinion, Congress, Campaigns and Elections, African Politics, American Presidency

Assistant Professor

Mathew Manweller, Constitutional Law, American Political Thought, American Political Economy, Direct Democracy

Instructor

Stefanie Wickstrom, Latin America

Emeritus Professor

Robert C. Jacobs, American Law and Politics

General Departmental Information

The Department provides an opportunity for students to become knowledgeable about the general subject matter of political science, while also offering a variety of courses that can provide depth in an area of the student's interest. Flexibility in the selection of courses is stressed.

The Department requires all Political Science majors to participate in the end-of-major assessment exercise at the conclusion of their senior year. Information on the assessment requirement may be obtained from the department's main office.

Graduates of the Department enter career fields such as federal or state government, other public service vocations, secondary school teaching, business, public relations, and the like; or they continue on to graduate study in law or political science.

Students must earn a grade of C- or better in order for that course to count in their Political Science major.

Political Science Honors

Political Science majors will qualify for honors at graduation with an overall GPA of 3.00 and a GPA of 3.50 in all political science courses.

Political Science Core Requirements Credits	
POSC 101, Introduction to Politics	5
POSC 210, American Politics	5
POSC 260, Comparative Politics	5
POSC 270, International Politics	5

Political Science Core Total 20

Bachelor of Arts

Political Science Major

47 credits (6295)

62 credits (6300)

Students may choose either a 47 credit major (6295) or a 62 credit major (6300). Those who have a second major or who have a minor in another discipline may opt for the 47 credit major.

Required Courses

Required Courses	Credits
Political Science Core Requirements	20
Select from the following:	5
POSC 481, Early Political Thought (5)	
POSC 482, Early Modern Political Thought (5)	
POSC 483, Recent Political Thought (5)	
POSC 485, American Political Thought and Culture (5)	
POSC 489, Senior Assessment	2
Electives	20 or 35
47 credit major (20)	
62 credit major (35)	
Select from any other courses in this Department. (Any transfer political science electives must be approved by the Department.)	

Total 47 or 62

Political Science Minor (6300)

Required Courses

Required Courses	Credits
Political Science Core Requirements	20
Electives	10
Select from any other courses in this department. (Any transfer political science electives must be approved by the Department.)	

Total 30

Political Science Courses

POSC 101. Introduction to Politics (5). The basic ideas around which political debate revolves and from which political institutions evolve.

POSC 210. American Politics (5). Origin and development of the United States government; structure, political behavior, organizations and processes; rights and duties of citizens. For general education (breadth) credit, a student must be enrolled in or have completed ENG 101.

POSC 230. State and Local Government (5).

POSC 260. Comparative Politics (5). Comparative political analysis, utilizing a

- variety of methods and theoretical approaches; application to selected western and non-western systems. Recommended to precede other courses in comparative politics.
- POSC 270. International Politics (5).** Conditions and principles governing the contemporary nation-state system.
- POSC 298. Special Topics (1-6).**
- POSC 311. Women and Politics (5).** The politics of human sexuality: men's and women's rights, sex roles, sexual discrimination, laws governing sexuality, and related issues.
- POSC 312. Public Opinion and Political Communication (5).** The formation, measurement, and political impact of public opinion. The relationship of mass media to American political attitudes and opinions.
- POSC 313. The Legislative Process (5).** The Congress of the United States, drafting of bills, legislative leadership, the committee system, relation to executive and judicial branches, pressure groups.
- POSC 314. American Presidency (5).** The office of the chief executive: its constitutional, political and administrative processes.
- POSC 315. Political Campaigns and Elections (5).** Evaluations of campaign techniques and practices; campaign financing and expenditures; voting behavior; election theory; elections and public policy.
- POSC 318. Political Parties and Interest Groups (5).** Theories of party systems; elitism and pluralism; party organization, functions, and activities; status, functions, and activities of interest groups in the public policy-making process.
- POSC 320. Public Administration (5).** Setting, purpose, functions and performance of public bureaucracy in the United States.
- POSC 325. Introduction to Public Policy (3).** Institutional context, politics and processes of agenda setting and policy formulation, implementation, evaluation, change and termination in the United States. Formerly POSC 220. Students may not receive credit for both.
- POSC 340. Politics and American Capitalism (5).** A survey of the interrelationship of the worlds of politics and business enterprise in American history; analysis of relevant philosophical and ideological arguments; case studies in such areas as industrial and trade policy.
- POSC 341. Politics and Religion (5).** The impact of religion upon American political thought and behavior.
- POSC 342. U.S. Foreign Policy (5).** Factors, processes and techniques in the formulation and execution of the foreign policy of the United States.
- POSC 350. Introduction to Public Law (5).** Legal bases and structure of governmental organization; fundamental doctrines and principles of constitutional, international and administrative law.
- POSC 361. Latin American Politics (5).** A comparative introduction to the political systems, cultures, and histories of Latin America and to prominent theories on democracy and political and economic development.
- POSC 362. Western European Politics (5).** Comparative analysis of politics and government of selected European countries.
- POSC 363. Russian and Soviet Politics (5).** Evolution, patterns and comparative analyses.
- POSC 365. African Politics (5).** Comparative analysis of the political systems of the African continent, including historical, social, economic, and international contexts.
- POSC 366. Government and Politics of East Asia (5).** An introduction to the politics and governments of selected East Asian countries. Focus will center on China, Japan, and Korea.
- POSC 367. Politics of Japan (5).** Investigation and analysis of politics and government in contemporary Japan.
- POSC 368. Chinese Politics (5).** Institutions, processes, policies and personalities of contemporary China.
- POSC 369. Korean Politics (5).** Political systems, institutions and processes of contemporary North and South Korea.
- POSC 373. International Politics of the Pacific Rim (5).** Political and economic relations of the contemporary Pacific Rim. Special focus on North America, Russia, and East Asia.
- POSC 375. The Middle East and International Politics (5).**
- POSC 376. International Organization (3).** Background, concepts, structure and functions of international organization.
- POSC 378. International Political Economy (3).** Political problems of management and development in the global economy and the prospects for creating improved mechanisms at the international level and for the less developed countries.
- POSC 398. Special Topics (1-6).**
- POSC 429. Research Seminar in Public Policy (3).** Prerequisites, POSC 320 and POSC 325. Review of theory and methods, proposal for Policy Analysis, preparation and presentation of policy analysis.
- POSC 451. Introduction to Constitutional Law (5).** Role of the United States Supreme Court in shaping governmental structure of the United States.
- POSC 452. The Constitution and Human Rights (5).** Role of the United States Supreme Court in the development of political and social rights.
- POSC 460. Contemporary Issues in Comparative Politics (3).** Focus on a specific contemporary issue in the field of comparative politics, with an emphasis on in-depth analysis and utilization of available research tools. Subject matter will vary with the instructor and with the changing nature of world politics. May be repeated once for a maximum of six credits.
- POSC 470. Contemporary Issues in International Relations (3).** Focus on specific contemporary issues in the field of international politics, with an emphasis on in-depth analysis and utilization of available research tools. Subject matter will vary with the instructor and with the changing nature of world politics. May be repeated once for a maximum of six credits.
- POSC 481. Early Political Thought (5).** Plato to Machiavelli.
- POSC 482. Early Modern Political Thought (5).** Political thought in the 16th, 17th, and 18th centuries.
- POSC 483. Recent Political Thought (5).** Political thought in the 19th and 20th centuries.
- POSC 485. American Political Thought and Culture (5).** The ideas and circumstances that have shaped the political culture of the U.S., as reflected in the works of selected political theorists, politicians and literary figures.
- POSC 489. Senior Assessment (2).** Required course for Political Science majors. Open only to seniors. A "capstone" course designed to assess students' mastery of fundamental knowledge of politics and of writing and analytical skills.
- POSC 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- POSC 496. Individual Study (1-6).** Prerequisite, permission of instructor.
- POSC 498. Special Topics (1-6).**
- POSC 499. Seminar (1-5).**

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs. POSC 345 Government, Science and Technology (5); POSC 474 International Law (3).

PRIMATE BEHAVIOR AND ECOLOGY PROGRAM

Contact: Lixing Sun, Science Building 236B

Bachelor of Science

Primate Behavior and Ecology Major (6400)

This program is designed to provide majors with interdisciplinary perspectives on the behavior and ecology of non-human primates in both captive and free-ranging settings. It will serve as background for graduate study in the behavior, ecology or phylogeny of primates, as well as for caregiving careers with primate laboratories, zoos or other captive facilities.

A double major is REQUIRED. Students must complete the requirements for the primate behavior and ecology major as well as the requirements for a 45-70 credit major in Anthropology, Biology, or Psychology.

Required Courses Credits

Introductory Level	
ANTH 110, 110LAB, Introduction to Biological Anthropology	6
PSY 101, General Psychology	5
BIOL 110, Basic Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5

Core Requirements

ANTH 313, Primate Social Behavior	4
BIOL 360, General Ecology	5
PSY 300, Research Methods in Psychology..	5
PSY 301, Learning (5) OR BIOL 465, Biology of Animal Behavior (4).....	4-5
PSY 362, Introductory Statistics	4
PRIM 220, Introduction to Primate Lab Procedures	2
PRIM 320, Lab OR ANTH 485, Method and Theory OR PSY 495, Directed Research OR BIOL 496, Research.....	3
Select two from the following three courses:8	
ANTH 412, Long Term Primate Studies (4)	
ANTH 416, Pongid Behavior (4)	
ANTH 418, Primate Evolution (4)	
ANTH/BIOL/PSY 499, Seminar OR PSY 442, Evolutionary Psychology.....	2-4
Electives by Advisement	6-8

Primate Behavior and Ecology Required Coursework Total69-74

Additional credits required to complete a major in Anthropology, Biology or Psychology28-51

Total 97-125

Primate Studies Courses

PRIM 220. Introduction to Primate Laboratory Procedures (2). Laboratory procedures to ensure physical, social and psychological well being of captive non-human primates: sanitation, safety, medical care, diet, USDA requirements, and socio-psychological factors. Requires 1 hour meeting and 4 hours of lab per week plus an organizational meeting and up to 8 hours of weekend lab over the quarter.

PRIM 320. Laboratory Work in Primatology (1-3). Prerequisite PRIM 220 and permission of instructor. Laboratory research and/or practical experience under the supervision of a program professor. May be repeated up to a maximum of 6 credits; may be taken concurrently with and as a supplement to other 300-400 level ANTH/BIOL/PSY/PRIM courses. Graded S or U.

PSYCHOLOGY

Faculty

Chair: Warren R. Street
 $\\$i$Psychology Building 421

Professors

Terry L. DeVietti, Physiological Psychology, Experimental
 James L. Eubanks, Organization Development, Performance Management and Training, General Experimental
 Roger S. Fouts, General Experimental, Language Acquisition, Primate Behavior, Comparative Psychology
 Eugene R. Johnson, School Psychology, Psychological and Educational Evaluation, Exceptional Children
 Susan D. Lonborg, Counseling Psychology, Psychotherapy Research, Psychology of Women, Substance Abuse, Sports Psychology
 Wayne S. Quirk, Sensation and Perception, Neuroscience
 Stephen B. Schepman, Organization Development, Work Motivation, Personality Theories
 John L. Silva, Emeritus, Clinical, Counseling, Testing
 Anthony J. Stahelski, Organization Development, Social Psychology, Small Group Interaction
 Stephanie Stein, School Psychology, Behavior Disorders in Children, Lifespan Development, Psychopathology

Elizabeth M. Street, Educational Psychology, Learning Theory, Exceptional Children, Behavioral Analysis
 Warren R. Street, Social Psychology, History of Psychology, General Experimental.
 Philip Tolin, Sensation and Perception, Human Factors, Experimental
 Lisa L. Weyandt, School Psychology, Developmental Neuropsychology, Attention Deficit-Hyperactivity Disorder

Associate Professors

W. Owen Dugmore, Counseling, Psychology of Adjustment
 Marte Fallshore, Human Learning and Memory, Development of Expertise, Statistics, Cognition, Humor
 Jeffrey M. Penick, Counseling Psychology, Health Psychology, Adult Development
 Terrence J. Schwartz, Educational Psychology, Counseling Psychology, Statistical Analysis
 Wendy A. Williams, General Experimental, Operant Conditioning and Animal Behavior

Assistant Professors

Neal A. Bowen, Multicultural Counseling, Treatment of Trauma, Migration Issues
 J. Phillip Diaz, School Psychology, Educational Psychology, Pediatric Neuropsychology
 Andrew M. Downs, Counseling Psychology, Disorders of Childhood.
 Megan D. Matheson, General Experimental, Primate Behavior, Comparative Psychology

Lecturers:

Karen R. Hendricks, Forensic Psychology, Domestic Violence, Child Abuse and Neglect, Neuropsychology
 Mark Soelling, Clinical, Educational, Developmental Psychology
 Robert Sorrells, Cognitive Experimental Psychology, Psycholinguistics

General Departmental Information

The Department of Psychology offers an important behavioral science component of the university's liberal arts curriculum. As part of the General Education program, courses in psychology broaden the student's knowledge about the causes of behavior, cognition, and emotion. Psychology courses also provide students in other majors knowledge and skills that are instrumental to effective action in their chosen area. Through our major and minor programs students can develop an understanding of the perspectives, content, and methods of the science and practice of psychology and prepare for graduate study. More information about our department is available on our Web site, www.cwu.edu/~psych.

Admission Requirements

Students wishing to apply for admission to the Psychology major or minor are required to register with and be advised by a member of the department faculty. Contact the department office for current admission requirements. The Department reserves the right to change requirements as circumstances warrant. Application forms may be obtained from the department office.

Students who have not met the admission criteria may be admitted conditionally. However, only students who are fully admitted to the major or minor are eligible to enroll in PSY 301, PSY 461, or PSY 490.

Departmental Honors

The eligibility requirements for admission to the psychology department honors program include the following:

- 1. Admission to the program:** The student must be a Psychology major, at least a junior but not more than a first quarter senior; and have completed all core courses with a GPA of at least 3.25 in those courses and have an overall cumulative GPA of 3.0. The student must apply in writing to the Department Chair, with a supporting letter of recommendation from a member of the faculty who agrees to supervise the student's work to completion.
- 2. Requirements and Procedures:** The student will register for 4-6 credits in PSY 497, Undergraduate Honors Thesis. In consultation with the supervising faculty member, the student chooses a three-person faculty committee. Plans for the honors project, generally an empirical research study, must be approved by the entire committee. The project will culminate in a written research report and a formal defense of the thesis.

Requirements for PSY 490, Cooperative Education

PSY 490 is a contracted field experience with a business, industry, government, or social service agency. In addition to the university requirements for a contracted field experience, the Department of Psychology has additional requirements that must be met if permission is to be granted to enroll in PSY 490. These requirements are as follows:

1. Senior standing
2. Full admission to a 60-credit Psychology major
3. A cumulative GPA of 3.0 or higher or three letters of recommendation from Psychology faculty.

Bachelor of Arts

Psychology Major

45 credits (6485)

60 credits (6490)

The Psychology major is intended for students who wish a liberal arts background in behavioral science or who intend to pursue graduate study in psychology. A faculty advisor can recommend electives appropriate to the student's objectives.

Students may choose either a 45 credit major (6485) or a 60 credit major (6490). Those who have a second major or who have a minor in a related discipline may opt for the 45 credit major.

Required Courses

	Credits
PSY 101, General Psychology.....	5
PSY 300, Research Methods in Psychology..	5
PSY 301, Learning	5
PSY 362, Introductory Statistics.....	4
PSY 363, Intermediate Statistics.....	4
PSY 461, History and Systems of Psychology	5
Select one or more courses from each of the following clusters:	
Cluster I.....	4
PSY 346, Social Psychology (4)	
PSY 444, Tests and Measurements (4)	
PSY 456, Industrial and Organizational Psychology (4)	
Cluster II.....	3-4
PSY 313, Developmental Psychology (4)	
PSY 447, Psychology of Adolescence (3)	
PSY 452, Adult Development and Aging (4)	
Cluster III.....	4-5
PSY 450, Sensation and Perception (4)	
PSY 460, Cognitive Psychology (5)	
PSY 473, Psychology of Thought and Language (4)	
PSY 478, Physiological Psychology (4)	
Cluster IV.....	4-5
PSY 445, Clinical, Counseling and Community Psychology (5)	
PSY 449, Abnormal Psychology (4)	
PSY 453, Theories of Personality (5)	
*Electives.....	0-17
45 credit major (0-2)	
60 credit major (14-17)	

*May include a maximum of five lower division credits

Total 45-60

Psychology Minor (6500)

Required Courses

	Credits
PSY 101, General Psychology.....	5
*PSY 300, Research Methods in Psychology	5
PSY 303, Analysis of Everyday Behavior	4
PSY 346, Social Psychology	4
Upper division	
Psychology electives	11

Total 29

*Students who have taken the research methods course required for their major in Law and Justice, Sociology, or Social Service may substitute another upper-division course for PSY 300.

Psychology Courses

PSY 101. General Psychology (5). An introduction to the science of behavior.

PSY 205. Psychology of Adjustment (5). The nature of the adaptive process and the means by which people adjust to their environment.

PSY 235. Relationships and Personal Development (3). Development of interpersonal relationships from initial encounters to stable commitments. Major focus on interaction patterns in intimate relationships. PSY 235 and FSCF 235 are equivalent courses. Students may not receive credit for both.

PSY 275. Community Development in Residence Halls (3). Components of successful student development in residential settings. Educational philosophy of residence halls, community development and problem solving. Credits do not apply toward Psychology degree major or minor. By permission of instructor only.

PSY 295. Laboratory Experience in Psychology (1-5). Permission of Department Chair required. PSY 101 recommended. May be repeated. Not more than 5 credit hours may be applied to a psychology major. Grade will be S or U.

PSY 298. Special Topics (1-6).

PSY 299. Seminar in Psychology (3).

PSY 300. Research Methods in Psychology (5). Prerequisites, PSY 101 and MATH 130. It is recommended that PSY 362 be taken concurrently. Four hours lecture plus 2 hours laboratory each week.

PSY 301. Learning (5). Prerequisites, PSY 300, 362 and admission to the Psychology major or minor. It is recommended that PSY 363 be taken concurrently. Conditioning, memory and cognitive processes. Four hours lecture per week plus 20 hours of laboratory.

PSY 303. Analysis of Everyday Behavior (4). Prerequisite, PSY 101. Environmental, cognitive, and biological influences on behavior in daily life.

- PSY 304. Effective Thinking (4).** The nature, function, and limits of intelligence; interactions with emotions and values; analyzing and constructing arguments; problem solving techniques; conflict management; group processes and leadership.
- PSY 313. Developmental Psychology (4).** Prerequisite, PSY 101. Students may not receive credit for both PSY 313 and PSY 314.
- PSY 314. Human Development and the Learner (4).** Development through the life cycle. Prerequisite, admission to teacher education program or on a space available basis with permission of the Chair, and PSY 101. Student may not receive credit for both PSY 314 and PSY 313.
- PSY 315. Educational Psychology (4).** Prerequisites, PSY 313 or PSY 314, and either admission to the teacher education program or on a space available basis with permission of the Chair. Learning theories, instructional principles, evaluation processes, classroom management.
- PSY 340. Teaching of Psychology (3).** Prerequisites, completion of course in which teaching or assisting is to be done and approval of Department Chair. May be taken twice for credit. Grade will be S or U.
- PSY 346. Social Psychology (4).** Recommended prerequisite, PSY 101. Social influences on individual behavior.
- PSY 350. Sleep and Dreaming (3).** Prerequisite, PSY 101 with PSY 300 recommended. Research and theory concerning the functions and dysfunctions of sleep and dreaming. Theories of dream interpretation and control.
- PSY 355. Environmental Psychology (4).** Behavioral responses to everyday natural and artificial environments.
- PSY 362. Introductory Statistics (4).** Prerequisite, MATH 130 or equivalent course in mathematics. Descriptive statistics and introduction to inferential statistics.
- PSY 363. Intermediate Statistics (4).** Prerequisite, PSY 362. Analysis of variance and selected non-parametric techniques.
- PSY 396. Individual Study (1-6).** Prerequisite, permission of the instructor. May not be repeated, except by honor students.
- PSY 398. Special Topics (1-6).**
- PSY 401. Psychology of Sport (4).** Prerequisite PSY 101. Current theory and research on sports psychology; application of psychological interventions in sports and fitness.
- PSY 438. Chemical Dependency and the Family (3).** An overview of theory and research regarding chemical dependency in the family with a conceptual understanding of models and methods that shape treatment.
- PSY 442. Evolutionary Psychology (4).** Application of principles of evolution to understanding of human and nonhuman behavior and cognition. PSY 442 and PSY 542 are equivalent courses. Students may not receive credit for both.
- PSY 444. Tests and Measurements (4).** Prerequisite, PSY 315 or 362. Psychological and educational tests, theory and practice. PSY 444 and PSY 544 are equivalent courses. Students may not receive credit for both.
- PSY 445. Clinical, Counseling and Community Psychology (5).** Prerequisite, PSY 101 with PSY 449 recommended. History, current trends, fields of employment, professional ethics, methods of psychological diagnosis and treatment.
- PSY 447. Psychology of Adolescence (3).** Prerequisite, PSY 101. Physiological, cognitive, and social aspects of maturation; problems of vocational choice and of increasing autonomy.
- PSY 448. Sexual Behavior (4).** Prerequisite, PSY 101. The scientific study of the learned and innate bases of sexual behavior in humans and lower animals.
- PSY 449. Abnormal Psychology (4).** Prerequisite, PSY 101. Symptoms, etiology and treatment of psychopathology and behavior problems.
- PSY 450. Sensation and Perception (4).** Prerequisites, PSY 300 with BIOL 201 recommended. Research, theoretical models of sensory and perceptual processes.
- PSY 452. Adult Development and Aging (4).** Prerequisite, PSY 313 or 314 recommended. Principles of adult psychological development and the aging process. Examination of adult behavior, life styles, crises in adult development, and cognitive, personality, and intellectual changes with aging.
- PSY 453. Theories of Personality (5).** Prerequisite, PSY 101.
- PSY 454. The Helping Interview (3).** Theory and practice of supportive interviewing skills.
- PSY 455. Behavioral Medicine and Health Psychology (4).** Prerequisite, PSY 101; and PSY 300 recommended. The application of psychology to the understanding of illness and to its prevention and treatment with special emphasis on current health topics (e.g., stress, HIV/AIDS).
- PSY 456. Industrial and Organizational Psychology (4).** Prerequisite, PSY 101 or permission of instructor. Application of psychological principles to personnel and organizational problems in labor, industry, government, education, and the military.
- PSY 460. Cognitive Psychology (5).** Prerequisite, PSY 300. Methods and theories of human cognition and information processing.
- PSY 461. History and Systems of Psychology (5).** Prerequisites, PSY 301 and admission to the Psychology major or minor.
- PSY 465. Psychology and the Law (3).** How the discipline of psychology contributes to our understanding of matters related to the law.
- PSY 467. Child Psychopathology (3).** Prerequisite, PSY 313 or 314 or permission of instructor. Discovery and treatment of the severely maladjusted child; the home, school, and community in relation to the child's mental health; relevant resources and research.
- PSY 473. Psychology of Thought and Language (4).** Prerequisite, PSY 101. Symbolic processes, concept formation, problem solving, language development. Formerly PSY 373. Students may not receive credit for both.
- PSY 476. Drugs (4).** Common drugs, psychotherapeutic agents and hallucinogens. Behavioral effects and physiological mechanisms.
- PSY 478. Physiological Psychology (4).** Prerequisite, BIOL 201 or permission of instructor. Problems, methods and techniques of neurophysiology and the physiology of human and infrahuman behavior patterns. PSY 478 and PSY 588 are equivalent courses. Students may not receive credit for both.
- PSY 483. Psychology of Women (3).** Prerequisite, PSY 101 or permission of instructor. The psychology of women from a social psychological perspective, which examines gender and situation and male-female interaction.
- PSY 484. Violence and Aggression (3).** Prerequisite, PSY 101 with PSY 346 recommended. Violence and aggression directed toward self, others, and society. Problems of prevention and treatment, related ethical and legal issues.
- PSY 487. Group Processes and Leadership (3).** Human relations in group situations. Grade will be S or U. PSY 487 and EDCS 487 are equivalent courses. Students may not receive credit for both.
- PSY 490. Cooperative Education (1-12).** Prerequisite, contact the Department office. An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

PSY 491. Workshop (1-6).

PSY 495. Directed Research (1-5).

Prerequisite, permission of instructor. May be repeated. Not more than four hours of PSY 295 and PSY 495 combined may be applied to a 45-credit Psychology major, and not more than 10 hours combined, to a 60-credit major. Grade will be S or U.

PSY 496. Individual Study (1-6).

Prerequisite, permission of instructor. May be repeated by honors students only.

PSY 497. Undergraduate Honors Thesis (2-6).

Prerequisite, admission to the Departmental Honors Program. May be repeated up to a total of six credits. By invitation of Department Chair. Research supervised by three-member committee of the Department of Psychology.

PSY 498. Special Topic (1-5). Prerequisite,

permission of instructor. Student- and faculty-initiated courses. Topics published in quarterly class schedule. May be repeated.

PSY 499. Seminar (1-5). May be repeated.

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: PSY 302, Principles of Applied Psychology (4); PSY 425, Advanced Chemical Dependency Counseling (3); PSY 437, Diagnosis and Assessment of Chemical Dependency (3); PSY 446, Experimental Personality and Social Psychology (4); PSY 457, Psychology of Exceptional Children (3); PSY 462, Computer Methods for Social Science (4); PSY 464, Emotional Growth of Children (3); PSY 488, Group Dynamics and the Individual (3).

PUBLIC POLICY

Coordinator: Rex Wirth
Psychology Building 481

Public Policy Major

The Public Policy program is interdisciplinary. It consists of a major in one of the participating disciplines and an interdisciplinary Public Policy major built around a core sequence drawn from Economics, Geography and Political Science. The purpose of the program is to better prepare majors from the three departments to enter the public sector work force or to pursue advanced specialized study.

Public Policy is not a free-standing major. It is normally taken in conjunction with a major in Economics (General Economics or Managerial Economics options) or Geography or Political Science. Students who combine majors in Public Policy and

either Geography or Political Science will receive a Bachelor of Science degree in Public Policy and a Bachelor of Arts degree in Geography or Political Science. As some Public Policy requirements and electives count toward both degrees or majors, the actual amount of additional coursework needed to fulfill the requirements of the second degree or major may be as low as 17 credits.

Bachelor of Science Public Policy Major (6600)

The Public Policy program is interdisciplinary. It consists of a disciplinary major and an interdisciplinary Public Policy major built around a core sequence drawn from Economics, Geography and Political Science. The purpose of the program is to better prepare students majoring in one of the participating disciplines to enter the public sector work force or pursue advanced specialized study.

Public Policy is not a free standing major.

Public Policy Core	Credits
ECON 201, Principles of Economics Micro..5	
ECON 202, Principles of Economics Macro.5	
ECON 332, Public Finance.....5	
GEOG 303, Introductory Cartography and GIS.....5	
GEOG 346, Political Geography .....4	
POSC 320, Public Administration .....5	
POSC 325, Introduction to Public Policy .....3	
POSC 429, Research Seminar in Public Policy	3

Sub Total 35

Research Tool Elective.....4-5	
OMIS 221, Introductory Business Statistics (5)	
PSY 362, Introductory Statistics (4)	
MATH 311, Statistical Concepts and Methods (5)	
SOC 364, Data Analysis in Sociology (5)	

Department Approved Electives in Economics, Geography, or Political Science.....12-15	
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Total 51-55

RELIGIOUS STUDIES

See Philosophy

SCIENCE EDUCATION

Faculty

Program Director: Martha J. Kurtz
SCI 302F

Associate Professors

Martha J. Kurtz, Chemistry and Science Education

Bruce Palmquist, Physics and Science Education

Assistant Professor

Ian J. Quitadamo, Biological Sciences and Science Education.

General Departmental Information

The primary function of the Science Education Program is preparing people to teach science. Coursework in science pedagogy is offered for students in the teacher preparation programs as well as for teachers in the schools. The Science Education Program works with science departments in the design and operation of degree programs for students who are preparing to teach in the secondary schools. We believe that students learn via the active construction of knowledge. To facilitate that process, all of our instruction follows the learning cycle model.

Our program seeks to help students become facilitators of learning in a diverse world. To that end, the Science Education Program has the following goals. An effective science teacher:

- Exhibits a breadth and depth of understanding of natural sciences necessary for their grade level endorsement as summarized in the Washington State Academic Learning Requirements for Science
- Demonstrates critical thinking skills by:
 - a. developing age-appropriate lessons using auditory, visual and kinesthetic components
 - b. developing age-appropriate lessons which relate science and technology to the everyday lives of students based on students' needs, interests and abilities
 - c. selecting appropriate modeling, discussion and laboratory exercises to help students learn science
 - d. problem solving in science
- Demonstrates competence in the appropriate uses of educational technology which support science learning
- Analyzes and evaluates her or his own teaching behavior and effectiveness and implements change based on these observations

- Fosters a positive attitude toward teaching and learning science, toward continual professional development in the sciences, and can compare and contrast science with other ways of knowing.

Students seeking endorsement for certification to teach a specialized science at the high school level must satisfactorily complete the teaching major within the specific science department. Students desiring to become middle or junior high school specialized teachers of science must obtain a teaching major in one or more of the following areas: Biology, Chemistry, Earth Sciences or Physics. All students are advised to work toward a second major or minor endorsement.

All students enrolled in science majors leading to certification are required to have an approved schedule on file with a Science Education advisor as early as possible and before endorsement for student teaching.

Science Education - Broad Area Science Teaching Minor (7145)

This minor prepares students with majors in Biology Teaching (1602), Chemistry Teaching (1851), Earth Science Teaching (2600) or Physics Teaching (6250) to teach middle school or junior high science and leads to a Broad Area Science Endorsement (WAC 180-82-355). Science teaching majors must complete the appropriate courses in the three disciplines shown below that are outside their major. For example, a Biology major would need to fulfill the Chemistry, Earth Science and Physics requirements shown below. Completion of this minor and a Biology, Chemistry, Earth Science or Physics teaching major leads to a Broad Area Science Endorsement. If you are interested in this minor, please see a science education advisor as soon as possible. This program may result in students taking more than four years to complete their degree (depending an advising, high school preparation and degree choice).

Required Courses (Complete all three areas not covered in major program)	Credits
Biology	
BIOL 110, General Biology	5
BIOL 111, Plant Biology	5
BIOL 112, Animal Biology	5
.....Subtotal	15
Chemistry	
CHEM 181, 181LAB, General Chemistry	5
CHEM 182, 182LAB, General Chemistry	5
CHEM 183, 183LAB, General Chemistry	5
.....Subtotal	15

Earth Science

GEOL 101, Physical Geology OR	
GEOL 102, Geology of National Parks....	4
GEOL 101LAB, Physical Geology Lab.....	1
GEOL 350, Northwest Geology	4
GEOL 210, Introduction to Geologic Field Methods (4) OR	
PHYS 101, 101LAB, Astronomy (5).....	4-5
Subtotal	12-

13

Physics

PHYS 111, 112, 113, Introductory Physics OR	
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics.....	15
Subtotal	15
Total	42-45

Science Education - Elementary Education Minor (7150)

Admission to this minor is limited to students majoring in elementary education (2870), early childhood education (2550), or special education (7810 or 7820). This minor does not lead to endorsement as a specialized science teacher.

There are three main goals for this minor. Students who complete this minor will:

1. develop a deeper understanding of the earth, life and physical sciences,
2. build an appreciation for the variety of methods in different fields of science, and
3. acquire skills and knowledge leading to quality teaching of a variety of science subjects.

Required Courses	Credits
Three lower division science course with labs (select a course from three of the following five areas: biology, chemistry, physics, earth science, and astronomy).....	
SCED 322, Science Education in Elementary School	3
SCED 420, Inquiry Activities for Elementary School Science.....	3
SCED 422, Advanced Teaching Strategies in Elementary Science	3
SCED 301, Interdisciplinary Science Inquiry.....	5
Total	27-29

Middle Level Math/Science Teaching Minor (7160)

This minor is designed for students who wish to teach science and/or math at the middle level (grades 5-8). Completion of this minor results in a Middle Level Math/Science endorsement. The coursework provides experiences in math and science content and pedagogy including field experience. Students will learn about math, science, and the psychology of adolescents in

addition to the more generalized coursework in their major. This minor is open only to students working on or currently holding teaching endorsements in Elementary Education, Biology, Chemistry, Earth Science, Mathematics, or Physics. Students interested in this minor should see an advisor as soon as possible to discuss overlapping requirements with the General Education Program (potentially 25 credits of this minor could satisfy General Education requirements).

Required Courses Credits (Complete all three areas not covered in major program)

Science	
Three introductory science courses with lab (1 life science, 1 earth science/ astronomy, and 1 physical science required.)	15
SCED 301, Interdisciplinary Science Inquiry ⁵ Math	
MATH 130, Finite Mathematics I.....	5
MATH 164, Foundations of Arithmetic I.....	5
MATH 250, Intuitive Geometry for Elementary Teachers.....	4
EDEL 468, Problem-solving Techniques for Middle Level	3
Other	
SCED 323/MATH 323, Teaching Experience in Math and Science	3
EDEL 477, Middle School Students and Their Environment	4
EDCS 482, Instruction and Assessment for the Middle Level.....	3
In Addition:	
Elementary Education Majors must take:	3
EDCS 424, Reading in the Content Fields (3)	
Secondary Science Majors must take:	
EDEL 323, Teaching Elementary School Mathematics (323)	
Secondary Math Majors must take:	
SCED 322, Science in the Elementary Schools (3)	
Total	50

Science Education Courses

SCED 301. Interdisciplinary Science Inquiry (5). Prerequisites, three lower division science courses with labs (select a course from three of the following five areas: biology, chemistry, physics, earth science and astronomy). Students will use concepts from biology, chemistry, earth science and physics to actively investigate the world and learn specific science processes. Six lecture/lab hours per week.

***SCED 322. Science Education in the Elementary School (3).** Techniques, selection of materials and appropriate subject matter for the various grade levels.

Demonstrations and student investigative activities for use in classroom science teaching.

***SCED 323. Teaching Middle School Mathematics and Science (3).** Prerequisites: MATH 324 or EDEL 323 and SCED 324 or SCED 322. Prospective teachers will learn and use the methods and materials needed to teach middle school students mathematics and science with emphasis on the use of experiments, manipulatives, problems solving, cooperative learning, and communication of understanding. SCED 323 and MATH 323 are equivalent courses. Students may not receive credit for both.

***SCED 324. Science Education in the Secondary Schools (4).** Prerequisite, EDCS 311. Should be taken before student teaching. Techniques and materials appropriate for teaching science at the secondary level. Demonstration and experiments for use in teaching.

SCED 398. Special Topics (1-6).

SCED 420. Inquiry Activities for Elementary School Science (3). Prerequisite, SCED 322. An inquiry-based course which approaches science teaching from the standpoint of the processes of science and their utilization.

SCED 422. Advanced Teaching Strategies in Elementary Science (3). Prerequisite, SCED 322 or permission of instructor. This course is designed to give students experience and training in the preparation of unique materials and teaching strategies in the area of science, as well as perfect techniques already possessed by the teacher.

SCED 442. Development of Special Materials (2). Prerequisite, permission of instructor.

SCED 491. Workshop (1-6).

SCED 495. Science Education Research (1-3). Prerequisite, SCED 324 or concurrent enrollment. This course introduces pre-service science teachers to qualitative and quantitative methods of action research. Course requires completion of a research project of the student's design.

SCED 496. Individual Study (1-6). Prerequisite, permission of instructor.

SCED 498. Special Topics (1-6).

*Enrollment is subject to being fully admitted to the Teacher Education Program.

Undergraduate Courses/Programs on Reserve

The following program is on reserve and may be offered subject to program needs: B.S. Science-Mathematics Education Major.

SOCIAL SCIENCE

Program Coordinator: Karen Blair
L&L 100

General Program Information

Social Science programs are designed to provide students with a study of human society which is interdisciplinary in nature. Major areas of study are carefully constructed from the disciplines of anthropology, economics, geography, history, political science, psychology, and sociology. Professional methodology courses in the teaching of the social sciences are offered for those students preparing to teach.

Social Science credits obtained in international programs may be used in major programs either as elective credits or as substitutions for required courses. In either case, however, consent for such application must be obtained in writing from both the academic department concerned and the Social Science program coordinator or designee prior to the experience being obtained.

The program coordinator will assist students with individual problems. Students are encouraged to seek advice from the coordinator when designing programs of study. Any deviation from program requirements as listed in the catalog requires approval of the program coordinator and the Dean of the College of Arts and Humanities.

Internship and contracted field experiences are available through various Social Science Departments. For further information, see the appropriate Social Science Chair.

**Bachelor of Arts
Social Science Major (7400)**

Students graduating from this program must attain a 2.5 GPA in the major and complete an exit survey upon graduation.

Required Courses	Credits
ANTH 130, Cultural Anthropology.....	5
PSY 101, General Psychology.....	5
SOC 107, Principles of Sociology.....	5
ECON 202, Principles of Economics Macro.5	5
GEOG 308, Cultural Geography.....	5
HIST 302, Introduction to History.....	3
POSC 210, American Politics.....	5
Electives.....	27

Select upper division courses from only one of the following disciplines:
Anthropology, Economics, Geography,
History, Political Science, Psychology,
Sociology

Total 60

**Social Science: Teaching
Secondary Major (7403)**

This major satisfies the endorsement for Social Studies.

Designed for social studies teaching at the junior high, middle school, and high school levels. Transfer students must take at least 10 credit hours of work in approved social science courses at CWU prior to application for endorsement for student teaching. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses Credits

ANTH 107, General Anthropology OR	
ANTH 120, Introduction to Archaeology	5
ECON 101, Economic Issues, OR	
ECON 102, World Economic Issues OR	
ECON 201, Principles of Economics	
Micro, OR	
ECON 202, Principles of Economics	
Macro	5
GEOG 108, Introduction to Human	
Geography OR	
GEOG 304, Economic Geography OR	
GEOG 308, Cultural Geography	5
GEOG 215, Concepts of GIS.....	3
GEOG 352, Geography of	
North America, OR	
GEOG 366, Geography of the	
Middle East OR	
GEOG 355, Geography of the Pacific	
Northwest	
GEOG 371, Geography of Europe, OR	
GEOG 415, Geography of Oceania, OR	
GEOG 450, Geography of Arid Lands,	
OR	
GEOG 451, Mountain Environments, OR	
GEOG 470, Geography of South	
America OR	
GEOG 471, Geography of Middle	
America OR	
GEOG 474, Geography of China OR	
GEOG 475, Geography of Asia	3-5
*HIST 101, 102, 103 (Select 2 courses), World	
Civilization	10
HIST 143, 144, United States History.....	10
HIST 301, Pacific Northwest History.....	3
HIST 338, Conquest and Compromise:	
Indians and Europeans in	
North America OR	
HIST 342, History of Black America	
to 1865 OR	
HIST 343, History of Black America	
since 1865 OR	
HIST 346, Women in American	
History OR	
HIST 354, American Environmental	
History OR	
HIST/ECON 348, Economic History of	
the United States OR	
ECON/HIST 388, Economic History of	
Europe Since 1760 OR	

ECON 346, Comparative Economic Systems	5
HIST/SOSC 421, Methods and Materials in the Social Sciences, Secondary	3
POSC 210, American Politics	5
SOC 107, Principles of Sociology	5
Electives in Upper Division courses in only one of the above areas.....	15
Students shall complete an exit survey tailored to the program as a final assessment of their performance in the program.	

Total 77-79

*Western Civilization may be substituted.

Social Science Courses

- SOSC 298. Special Topics (1-6).
- SOSC 399. Seminar (1-5).
- SOSC 421. Methods and Materials in the Social Studies- Secondary (3). Prior completion of EDCS 311 recommended. SOSC 421 and HIST 421 are equivalent courses. Students may not receive credit for both.
- SOSC 491. Workshop (1-6).
- SOSC 496. Individual Study (1-6).
- SOSC 498. Special Topics (1-6).
- SOSC 499. Seminar (1-5).

SOCIOLOGY

Faculty

Chair: Kirk Johnson
Farrell Hall 409

Professors

- Laura L. Appleton, Sex Roles, Social Movements, Social Theory
- John R. Dugan, Statistics, Methodology, Social Psychology
- Kirk A. Johnson, Criminology, Delinquency, Victimization, Organizations, Methods

Associate Professors

- Delores Cleary, Criminology, The Life-Course, American Society, Minorities, Ethnic Studies
- Nelson Pichardo, Ethnic Studies, Social Movements
- Nancy Wessel, Link Project, Family, Child Abuse, Social Change

Assistant Professor

- Hong Xiao, Social Stratification, Comparative Sociology, China Studies

General Departmental Information

Through its curriculum, the Department of Sociology provides opportunities for students to understand the major conceptual

and methodological tools used by sociologists and others to understand society. Students will be encouraged to: 1) see society as a concrete, day-to-day behavior of human beings; 2) grasp the relationship between history, society and the individual's own life; 3) realize that social patterns are tools for the accomplishment of human ends and are not necessarily unalterable facts of life; and 4) develop the ability to observe critically and analyze social phenomena.

In providing these intellectual skills, the Sociology major is relevant to a wide variety of academic and occupational pursuits and is concerned with developing skills of analytic thought and practice in areas including the social services profession, labor and business organization, personnel work, government program administration and graduate study.

Students who major in Sociology and Social Services are required to register with the Department, at which time an advisor will be selected. In order to develop a Program of Study, students are required to meet once a quarter with their advisor. Further information on specific courses, the faculty and career opportunities is available in the Department office. Students must complete an end of major assessment prior to graduation.

Honors in Sociology

1. The Sociology Department's honors program is designed for students who wish to explore a particular research problem in depth.
2. The program is open to Sociology majors who have completed 20 credit hours in sociology and have achieved a junior standing.
3. The student: (a) selects an honors advisor and designs a research project in consultation with him/her; (b) writes a letter of application to the Chair of the Department; and, (c) if accepted, completes a research paper that is approved and supervised by his/her honors advisor and a second member of the department.
4. Credit for this paper may be obtained through Sociology 497.

Bachelor of Arts Sociology Major (7595)

Required Courses

Credits	
SOC 107, Principles of Sociology	5
SOC 350, Social Theory	5
SOC 363, Methods of Social Research	5

Select one course from each of the following categories:14-20

Deviance and Social Control

- SOC 343, Child Abuse (4)

- SOC 344, Juvenile Delinquency (4)
- SOC 345, Deviance (5)
- SOC 346, Criminology (5)
- SOC 348, Wpmen and Crime (4)
- SOC 352, Punishment and Corrections (5)
- Social Differentiation and Inequality**
- SOC 325, Aging (4)
- SOC/ETS 354, Minority Experience (5)
- SOC 365, Minority Groups (5)
- SOC 386, Seminar in Racism (5)
- SOC 388, Women in Management (3)
- SOC 442, Social Welfare Policy (4)
- SOC 445, Social Inequality (5)
- Social Structure and Institutions**
- SOC 307, Individual and Society (5)
- SOC 320, Death and Dying (5)
- SOC 327, Sociology of Health (4)
- SOC 349, Law and Society (4)
- SOC 351, Sociology of Work (5)
- SOC 357, Sociology of Families (4)
- SOC 367, Sociology of Religion (5)
- SOC 373, Social Groups (5)
- SOC 459, Organizations (5)
- Social Change and Global Issues**
- SOC 302, International Links (4)
- SOC 326, Demography of Contemporary World Populations (4)
- SOC 362, Social Movements (5)
- SOC 370, Social Change (5)
- SOC 375, Sociology of Conflict (5)
- SOC 380, Social Ecology (5)
- SOC 382, Sociology of the Future (5)
- SOC 385, Comparative Sociology (5)

Sociology Total 30-35

*Approved Electives in Sociology10-15

Total 45

*A maximum of 5 credits of elective lower-division coursework may be counted toward the major. PSY 363, Intermediate Statistics, is an approved elective.

Bachelor of Arts

Sociology Major (7600)

Required Courses	Credits
SOC 107, Principles of Sociology	5
SOC 350, Social Theory I.....	5
SOC 363, Methods of Social Research.....	5
SOC 364, Data Analysis in Sociology.....	5

Select one course from each of the following sub-fields:

Deviance and Social Control

- SOC 343, Child Abuse (4)
- SOC 344, Juvenile Delinquency (4)
- SOC 345, Deviance (5)
- SOC 346, Criminology (5)
- SOC 348, Women and Crime (4)
- SOC 352, Punishment and Corrections (5)

Social Differentiation and Inequality

- SOC 325, Aging (4)
- SOC/ETS 354, Minority Experience (5)
- SOC 356, Sex Roles in Society (5)

SOC 388, Women in Management (3)
 SOC 365, Minority Groups (5)
 SOC 386, Seminar in Racism (5)
 SOC 442, Social Welfare Policy (4)
 SOC 445, Social Inequality (5)
Social Structure and Institutions
 SOC 307, Individual and Society (5)
 SOC 320, Death and Dying (5)
 SOC 327, Dociology of Health (4)
 SOC 349, Law and Society (4)
 SOC 351, Sociology of Work (5)
 SOC 357, Sociology of Families (4)
 SOC 367, Sociology of Religion (5)
 SOC 373, Social Groups (5)
 SOC 459, Organizations (5)
Social Change and Global Issues
 SOC 302, International Links (4)
 SOC 326, Demography of Contemporary World Populations (4)
 SOC 362, Social Movements (5)
 SOC 370, Social Change (5)
 SOC 375, Sociology of Conflict (5)
 SOC 380, Social Ecology (5)
 SOC 382, Sociology of the Future (5)
 SOC 385, Comparative Sociology (5)

Sociology Core Total 35-40

*Approved Electives in Sociology20-25
Total 60

*A maximum of 5 credits of elective lower-division coursework may be counted toward the major. PSY 363, Intermediate Statistics, is an approved elective.

**Bachelor of Science
 Sociology Major (7600)**

This major is suggested for students preparing for graduate study.

Required Courses	Credits
SOC 107, Principles of Sociology	5
SOC 350, Social Theory I.....	5
SOC 363, Methods of Social Research	5
SOC 364, Data Analysis in Sociology, or equivalent.....	5
SOC 450, Social Theory II	5
SOC 464, Applied Data Analysis.....	4
SOC 495, Sociological Research	5
Sociology Core Total	34

Select one course from each of the following categories:

Deviance and Social Control
 SOC 343, Child Abuse (4)
 SOC 344, Juvenile Delinquency (4)
 SOC 345, Deviance (5)
 SOC 346, Criminology (5)
 SOC 348, Women and Crime (4)
 SOC 352, Punishment and Corrections (5)

Social Differentiation and Inequality
 SOC 325, Aging (4)
 SOC/ETS 354, Minority Experience (5)

SOC 356, Sex Roles in Society (5)
 SOC 365, Minority Groups (5)
 SOC 386, Seminar in Racism (5)
 SOC 388, Women in Management (3)
 SOC 442, Social Welfare Policy (4)
 SOC 445, Social Inequality (5)
Social Structure and Institutions
 SOC 307, Individual and Society (5)
 SOC 320, Death and Dying (5)
 SOC 327, Sociology of Health (4)
 SOC 349, Law and Society (4)
 SOC 351, Sociology of Work (5)
 SOC 357, Sociology of Families (4)
 SOC 367, Sociology of Religion (5)
 SOC 373, Social Groups (5)
 SOC 459, Organizations (5)
Social Change and Global Issues
 SOC 302, International Links (4)
 SOC 326, Demography of Contemporary World Populations (4)
 SOC 362, Social Movements (5)
 SOC 370, Social Change (5)
 SOC 375, Sociology of Conflict (5)
 SOC 380, Social Ecology (5)
 SOC 382, Sociology of the Future (5)
 SOC 385, Comparative Sociology (5)

Subtotals 49-54

*Approved Electives in Sociology21-26
Total 75

*A maximum of 5 credits of elective lower-division coursework may be counted toward the major. PSY 363, Intermediate Statistics, is an approved elective.

Social Services Major (7420)

The social service major is designed for students interested in working in the human services delivery systems. Students are required to have a strong grounding in sociology as well as the applied field of social services. The course work introduces students to critical issues in the field and offers students the opportunity to work within agencies in the community.

The major requirements are such that students are encouraged to organize their program of study to include a minor in an area of interest or specialization outside of Sociology. Some areas that fit well with this major include psychology, ethnic studies, family studies, gerontology, women studies, community health and the like.

Required Courses	Credits
Practice Area	
SOC 301, Introduction and History of Social Service Agencies.....	4
SOC 310, Social Service Methods and Casework	3
PSY 454, The Helping Interview	3
***SOC 490, Cooperative Education	4

Analytic Area
 **SOC 350, Social Theory I.....5
 SOC 363, Methods of Social Research5
 SOC 364, Data Analysis in Sociology..... 5
 SOC 487, Senior Capstone Seminar 4
Macro Considerations in Social Services
 SOC 411, Comparative Social Service System 4
 SOC 442, Social Welfare Policy4
Social Organization Area
 Choose one course.....4
 SOC 415, Urban Society (4)
 SOC 460, Community Structure and Organization (4)
Contemporary Society Area
 Choose one course..... 5
 SOC 365, Minority Groups (5)
 SOC 356, Sex Roles in Society (5)
 SOC 386, Seminar on Racism (5)
 **SOC 445, Social Inequality (5)

*Approved Electives in Sociology12

Total 62

*A maximum of 5 credits of elective lower-division coursework may be counted toward the major. PSY 363, Intermediate Statistics, is an approved elective.
 **SOC 107 is prerequisite for SOC 350 and 445.
 ***Additional credits in SOC 490 may count toward graduation.

Sociology Minor (7600)

Required Courses	Credits
SOC 107, Principles of Sociology	5
*Approved Electives in Sociology	20

Total 25

*SOC 490, Cooperative Education, and SOC 496, Individual Study, does not count toward the minor. A maximum of 5 credits of elective lower-division coursework may be counted toward the minor.

Social Services Minor (7420)

Required Courses	Credits
SOC 301, Introduction to the Social Services	4
SOC 310, Social Service Methods and Casework	3
SOC 442, Social Welfare Policy OR SOC 460, Community Structure and Organization.....	4
PSY 454, The Helping Interview	3
*Electives in Sociology	16

Total 30

*SOC 490, Cooperative Education, and SOC 496, Individual Study, does not count toward the minor. A maximum of 5 credits of elective lower-division coursework may be counted toward the minor.

Sociology Courses

- SOC 101. Social Problems (5).** An introduction to the study of contemporary issues such as poverty, military policies, families, crime aging, racial and ethnic conflict, and the environment.
- SOC 107. Principles of Sociology (5).** An introduction to the basic concepts and theories of sociology with an emphasis on the group aspects of human behavior.
- SOC 205. American Society (5).** Introduction to the social structure and processes of American society; emphasis on institutions such as government, family, schools, and religion, and processes such as conflict, change, stratification, mobility, and communication.
- SOC 265. Computer Applications in the Social Sciences (3).** Computer skills for effective social science research and report writing; internet searches, home pages, graphical and textual transfers, spreadsheets from imported data and CD-ROM use. Two hours of lecture and two hours of lab.
- SOC 271. Sociological Analysis (3).** The logic of sociological investigation and explanation.
- SOC 291. Workshop (1-6).**
- SOC 296. Individual Study (1-6).** Prerequisite, permission of instructor.
- SOC 299. Seminar (1-5).** Prerequisite, permission of instructor.
- SOC 301. Introduction and History of Social Service Agencies (4).** Introduction to the fields of social welfare, health services and corrections; organization and function of agencies. Formerly SOC 201, student may not receive credit for both.
- SOC 302. International Links (4).** Prerequisite, participation in the Link program. An orientation course for students participating in the Link program who will be going to Mexico.
- SOC 303. Sociology of Disaster (5).** The ways in which human communities bring about, prepare for, and respond to calamitous environmental change.
- SOC 307. Individual and Society (5).** An analysis of the relationship between social structure and the individual.
- SOC 310. Social Service Methods and Casework (3).** Prerequisite, SOC 301 or permission of instructor. Casework interviewing techniques and skills, traditional and contemporary methods, emphasis upon developing a personal casework style.
- SOC 320. Death and Dying (5).** An analysis of social attitudes, practices, and institutions associated with death and dying in American society.
- SOC 325. Aging (4).** Problems and advantages of growing old in society; post-parental families, retirement, the economics of pensions, importance of interaction in old age, residential facilities, geriatric medicine, and dying.
- SOC 326. Demography of Contemporary World Populations (4).** Demographic analysis, fertility and the birth control movement, mortality and life expectancy, and migration. Involves use of computers.
- SOC 327. Sociology of Health (4).** The social causes of disease and illness behavior, organization of medical care and comparative health systems.
- SOC 330. Sociology of Leisure (5).** The emergence of leisure as a major social institution and its impact on society, culture and personality.
- SOC 331. Sociology of Sport (3).** Sports and games as social phenomena.
- SOC 333. Genealogy (1).** Kin names, pedigrees, family trees, and ancestral histories. Research with records, family documents, and interviews.
- SOC 338. Political Sociology (3).** Major theories of power in society. Analysis of the political/economic structure of society as it determines the differential access to social power by different social groups.
- SOC 340. Social Interaction (5).** Face-to-face contact, communication and social psychological features of groups.
- SOC 343. Child Abuse (4).** An analysis of the causes, consequences of and prospects for dealing with the phenomena of child abuse and neglect in American society.
- SOC 344. Juvenile Delinquency (4).** Prerequisite, SOC 107. A study of social factors causing delinquency in youth; major theories, analysis of treatment and control.
- SOC 345. Deviance (5).** A survey of approaches to the field of deviance with emphasis on contemporary work and focus on the problematics of the field.
- SOC 346. Criminology (5).** A study of the adult criminal, criminal behavior, and criminality in human societies.
- SOC 348. Women and Crime (4).** Prerequisite, SOC 346. This course will critically assess the current theoretical and empirical literature on female criminality and social control.
- SOC 349. Law and Society (4).** Prerequisite, SOC 107. Origin, maintenance and change of legal structures and processes in society with particular emphasis on legal institutions in American society.
- SOC 350. Social Theory I (5).** Prerequisite, SOC 107 or permission of instructor. An introduction to social theory through study of early social thinkers, emphasizing the works of Durkheim, Marx, and Weber.
- SOC 351. Sociology of Work (5).** An historical view of the impact of technology on society and social change. Importance of work as an institution. How work relates to the other social institutions, to culture, and to the development of personality.
- SOC 352. Punishment and Corrections (5).** Origin, maintenance, structure and function of institutions of punishment and correction with particular emphasis on American society; problems of change in punishment and corrections.
- SOC 354. Minority Experience (5).** Explanations will be identified for institutional racism common to the history and character of American minorities. SOC 354 and ETS 354 are equivalent courses. Students may not receive credit for both. Formerly ETS 355.
- SOC 356. Sex Roles in Society (5).** A review and analysis of the development, maintenance, and consequences of masculine and feminine social roles.
- SOC 357. Sociology of Families (4).** Theory and research about familial interaction and society.
- SOC 362. Social Movements (5).** Causes, organizational problems, and consequences of revolutions, and political, religious and social movements.
- SOC 363. Methods of Social Research (5).** Principles and applications of social research methods. Formerly SOC 465. Students may not receive credit for both.
- SOC 364. Data Analysis in Sociology (5)** Prerequisite, SOC 363.
- SOC 365. Minority Groups (5).** Prerequisite, SOC 107 or ETS 101 or permission. Study of the social formation of minority groups in American society, their historical development, current conditions, and issues.
- SOC 367. Sociology of Religion (5).** The social organization of religious experience in small and large societies and the relationship of religious beliefs to human life.
- SOC 369. Mass Media and Society (3).** Relationship of the mass media to social institutions; including philosophy, responsibilities, regulations and criticism. Same as COM 369, students may not receive credit for both.
- SOC 370. Social Change (5).** Social processes, institutional development and revolutions.
- SOC 373. Social Groups (5).** Principles of social behavior within and between groups.
- SOC 375. Sociology of Conflict (5).** Major theories of conflict in society. Applications of theories to contemporary United States. Investigation of major factors related to societal power and conflict.

- SOC 380. Social Ecology (5).** The structure and development of human communities as they interact with environmental conditions.
- SOC 382. Sociology of the Future (5).** A sociological analysis of predictions of the future. Principal questions will revolve around the effects of technology on social structure and the individual.
- SOC 385. Comparative Sociology (5).** Structural similarities and differences in family, religious, economics, and political institutions among societies.
- SOC 386. Seminar on Racism (5).** Prerequisite, one of the following: SOC 101, 107, 365, or ETS 101. An advanced level of study examining the nature and dynamics of social forces in American society that produce the phenomena of racism. The changing forms of racism that occur historically at the intersection of class and gender oppression. Formerly SOC 399.1. Students may not receive credit for both.
- SOC 388. Women in Management (3).** An examination of the ways in which American sex roles, together with corporate cultural practices and organization structures, affect women's attainment of and performance in managerial roles within business, educational, and professional organizations. SOC 388 and MGT 388 are equivalent courses. Formerly SOC/MGT 368. Student may receive credit for one course only.
- SOC 393. Field Experience in Sociology (1-15).** Prerequisite, SOC 363 and permission of instructor. Supervised field experience at a location to be selected by the instructor and the students. The instructor will accompany students into the field, help in the selection of a project, and assist in evaluation of student work. Formerly SOC 392. Students may not receive credit for both.
- SOC 398. Special Topics (1-6).**
- SOC 399. Seminar (1-5).** May be repeated.
- SOC 411. Comparative Social Service Systems (4).** Prerequisite, major in Social Services and SOC 301 or permission of instructor. A cross-culture comparison of social service programs and policies in various countries. Students may not receive credit for both SOC 311 and SOC 411.
- SOC 415. Urban Sociology (4).** Prerequisite, SOC 107 and 10 credits of 300 level sociology, or permission of the instructor. Growth, structure, and functions of the city; their relationships to surrounding and rural areas, urban ecological patterns, planning, and the problems of urban living.
- SOC 425. Sociology of Education (5).** Impact of culture on schools. Examination of contemporary social trends and relationships among church, school and government; contributions of sociology to the area of education in its broadest sense.
- SOC 442. Social Welfare Policy (4).** Review of U.S. social welfare policy, emphasis on 20th Century social policies influencing nature of welfare state, and delivery of social services.
- SOC 445. Social Inequality (5).** Prerequisite, SOC 107. The distribution of wealth, power and prestige in society.
- SOC 450. Social Theory II (5).** Prerequisite, SOC 350. Study of selected modern social theories, including structural functionalism, conflict theory, exchange theory, symbolic interactionism, ethnomethodology and the dramaturgical school.
- SOC 459. Organizations (5).** Theory and research on the structure and development of organizations.
- SOC 460. Community Structure and Organization (4).** Prerequisite, SOC 107 and 10 credits of 300 level sociology work. Community formation from inner city to rural hamlet. Changes in community institutions and organizational life related to industrialization, politics, social stratification and ethnicity. Students will conduct field research on specific community functions and social structures.
- SOC 464. Applied Data Analysis (4).** Prerequisite, SOC 364 or equivalent. Application of the principles of research methodology and statistical analysis to the collection and analysis of social data.
- SOC 470. Contemporary Social Thought (4).** Prerequisite, SOC 450 or permission of instructor. Prospects for sociology theory.
- SOC 481. Philosophy of the Social Sciences (5).** A critical study of basic assumptions, distinctive methods and explanations, and value and normative considerations in the social sciences. SOC 481 and PHIL 481 are equivalent courses. Students may not receive credit for both.
- SOC 487. Capstone in Social Service (4).** Prerequisite, senior standing or permission. This capstone course is designed for social service majors in the sociology program as a final course in their major. Course integrates theoretical and substantive issues and prepares students for a job search in related fields or graduate school pursuits. Grade will be S or U. Formerly SOC 489.1. Students may not receive credit for both.
- SOC 488. Colloquy (1-3).** Prerequisite, one course in Sociology issues. Current literature in sociology. May be repeated up to a total of 10 credits.
- SOC 490. Cooperative Education (1-12).** An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
- SOC 491. Workshop (1-6).**
- SOC 492. Sociology Teaching Experience (1-5).** Prerequisite, senior status Sociology majors only. Experience in the classroom and/or laboratory teaching. May be repeated up to a total of 10 credits. Formerly SOC 495.
- SOC 494. Research Practicum (1-5).** Prerequisite, senior status Sociology majors only. Supervised experience in qualitative research. May be repeated for a total of 10 credits
- SOC 495. Sociological Research (1-15).** Prerequisites, SOC 350, 364, 465 and permission of instructor. Individual research project. This course may be repeated up to a maximum of 15 credits. Formerly SOC 493.
- SOC 496. Individual Study (1-6).** Prerequisite, 10 hours or more in sociology.
- SOC 497. Honors Thesis (1-5).** Prerequisite, admittance to Honors Program. May be repeated up to a total of 5 credits.
- SOC 498. Special Topics (1-6).**
- SOC 499. Seminar (1-5).**

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs.
SOC 466. Social Service Program Evaluation (3).

STEP PROGRAM

For information contact:
 Lisa Ely
 Dept of Geological Sciences, Lind 220

General Program Information

The Science, Technology and Mathematics Talent Enhancement Program (STEP) is an innovative program designed to prepare and retain students in majors and careers in science, technology and mathematics. It consists of an integrated sequence of classes, enrichment activities and student research opportunities in which students gain hands-on experience in modern scientific research methods, explore theme-based interdisciplinary scientific issues, and develop

mentoring relationships with CWU science faculty. Application to the program is open to new freshman students with an interest in and aptitude for Science, Technology, and Mathematics fields. The core of the STEP program at CWU is a three-quarter long Science Seminar Series for freshmen. Students who participate in the Science Seminar courses, STEP 101, 102 and 103, will be eligible to apply for and participate in a NSF-funded research internship with a CWU faculty member during their sophomore year. STEP also includes a Summer Science Institute for high-school students at CWU.

The pilot STEP program at CWU is funded through a grant from the National Science Foundation. The program involves faculty members from six academic departments in the College of the Sciences: Biological Sciences, Chemistry, Computer Science, Geological Sciences, Mathematics, and Physics. More information about the program and participating faculty members is available on the STEP Web site at www.cwu.edu/~step/.

STEP Program Courses

STEP 101. Science Seminar I: Research

Experience (2). Prerequisite, must be a freshman student accepted into STEP and enrolled in coordinated special section of UNIV 101 course. First course in three-quarter freshman science series. Students gain practical introduction to the scientific process through designing and conducting experimental, laboratory and field investigations.

STEP 102. Science Seminar II: Interdisciplinary Research Theme (2). Prerequisite, STEP 101 and must be freshman student accepted into STEP. Second course in three-quarter freshman science series. Students will take an interdisciplinary approach toward a class research project centered on a single theme.

STEP 103. Science Seminar III: Current Topics (2). Prerequisite, STEP 101, 102 and must be freshman student accepted into STEP. Third course in three-quarter freshman science series. Topical survey of active research efforts by faculty and students in science, technology and mathematics fields at CWU.

THEATRE ARTS

Faculty

**Chair: George W. Bellah
McConnell 106**

Professor

Brenda J. Hubbard, Production Artistic Director, Acting, Directing, Theatre History and Literature
Wesley Van Tassel, Acting, Directing, Theatre Management, Theatre History, playwriting and Literature

Associate Professors

Scott R. Robinson, Scenic, Lighting, and Costume Design, Costume Technology, Stage Management
George W. Bellah, Acting, Directing, Stage Movement, Stage Combat
Michael J. Smith, Acting, Directing, Voice, Literature

Assistant Professors

Derek Lane, Production Manager, Scenic and Lighting Design and Technology, Stage Management
Christina Barrigan, Lighting Design and Technology

Lecturers

Dave Barnett, McConnell Stage Manager, Technical Director, Scene Technology, Drafting.
Paulette Bond, Costume Shop Manager, Costume Technology and Make-up

General Departmental Information

The Theatre Arts major offers students classroom instruction and practical production opportunities in a lively and disciplined setting. Upon completion of the major, students are prepared to pursue theatre as a career, to teach theatre at the secondary level, or to continue studies in a graduate program. Students without primary interest in theatre arts are also encouraged to participate in the program. Many of the classes serve students majoring in other disciplines.

Theatre Arts offers minors in six specializations: Teaching Theatre K-12, Theatre Generalist, Performance, Design and Technology, Youth Drama and Theatre Management.

Admission to any theatre arts course which has prerequisites requires either a suitable placement test score or a grade of C- or better in each listed prerequisite to that course. Students must check course catalog for all prerequisites.

Theatre Arts Core Requirements	Credits
TH 107, Introduction to Theatre	4
TH 166, Theory of Play Production	3
TH 261, Costume Technology	2
TH 267, Scene Technology	2
TH 268, Lighting Technology	2
TH 244, Basic Acting	2
TH 301, 401, Production Application	9
TH 329, Directing I	3
TH 363, 364, Theatre History	8
TH 393, 493, Theatre Laboratory	6
TH 495, Senior Research Project	2
TH 363.3, Theatre History III (4) OR TH 330, Playwriting (4) OR TH 430, Playwright's Workshop (4)	4
Dramatic literature electives	4

Theatre Arts Core Total 51

NOTE: Electives in all specializations must have prior approval by student's theatre advisor.

Bachelor of Arts

Theatre Arts Major (8450) with Specialization

Theatre Generalist Specialization (8455)

Courses	Credits
Theatre Arts Core Requirements	51
Generalist electives	24
A minimum of 9 credits of electives must be in 301, 401, and 332.	

Total 75

Performance Specialization (8456)

Courses	Credits
Theatre Arts Core Requirements	51
TH 245, Basic Acting: Movement	2
TH 246, Basic Acting: Voice	2
TH 344, 345, Intermediate Acting	6
TH 301, 401, Production Application	9
Specialization Electives	5

Total 75

Design and Technology Specialization (8457)

Courses	Credits
Theatre Arts Core Requirements	51
TH 266, Theatre Drafting	2
TH 366, Elements of Theatre Design and Rendering Technique	3
Select from:	3
TH 361, Stage Costuming (3)	
TH 367, Stage Scenery (3)	
TH 368, Stage Lighting (3)	
Select from:	4
TH 461, Costume Design (4)	

TH 467, Scenic Design (4)	
TH 468, Lighting Design (4)	
TH 301, 401, Production Application.....9	
Specialization elective:.....3	
Total	75

**Youth Drama
Specialization (8458)**

Courses	Credits
Theatre Arts Core Requirements.....51	
TH 312, Creative Dramatics in School and Leisure.....3	
TH 313, Children's Theatre.....3	
TH 420, Drama in the Classroom.....5	
Select from:.....6	
TH 301, 401, Production Application OR TH 492, Practicum in Producing and Touring Theatre (3)	
Specialization electives:.....7	
Total	75

**Theatre Management
Specialization (8459)**

Courses	Credits
Theatre Arts Core Requirements.....51	
TH 350, Theatre Management.....3	
TH 351, Theatre Management.....3	
ACCT 251, Basic Accounting OR ACCT 301, Financial Accounting Analysis.....5	
ECON 101, Economic Issues OR ECON 201, Principles of Economics Micro.....5	
HRM 381, Management of Human Resources OR MKT 360, Principles of Marketing OR MGT 380, Organizational Management.5	
Select from:.....3	
TH 301, 401, Production Application OR TH 332, New Play Production	
Total	75

**Theatre Arts :
Teaching K-12 (8452)**

This major satisfies the endorsement for Drama. A student should have a minor leading to endorsement in English, language arts, or music. Also, see University requirements for teacher certification. Students taking this major are required to complete the professional education program requirements offered through the Curriculum and Supervision Department.

Required Courses	Credits
TH 107, Introduction to Theatre.....4	
TH 166, Theory of Play Production.....3	
TH 207, Introduction to Child Drama.....3	
TH 261, Costume Technology.....2	
TH 267, Scene Technology.....2	
TH 268, Lighting Technology.....2	

TH 244, Basic Acting.....2	
TH 245, Basic Acting: Movement.....2	
TH 246, Basic Acting: Voice.....2	
TH 312, Creative Dramatics.....3	
TH 313, Children's Theatre.....3	
TH 329, Directing I.....3	
TH 361, Stage Costuming OR TH 367, Stage Scenery OR TH 368, Stage Lighting.....3	
TH 363, TH 364, OR TH 365, Theatre History (4,4,4).....8	
TH 393, 493, Theatre Laboratory.....6	
TH 420, Drama in the Schools K-12.....5	
TH 429, Directing II.....3	
Department approved Dramatic Literature elective.....4	
Total	60

Theatre Arts Minor

Required Core	Credits
TH 107, Introduction to Theatre.....4	
TH 166, Theory of Play Production.....3	
TH 244, Basic Acting I.....2	
TH 301, 401, Production Application OR TH 393, 493, Theatre Laboratory.....3	
Specialization Electives:.....18	
Total	30

Electives for both majors and minors. Electives must be selected from the approved list of courses in the specializations. All minors require a minimum of 30 credits.

**Teaching Grades K-12
Specialization Electives:
(Minor Only) (8452)**

Take TH 312, Creative Dramatics, PLUS select from any electives in Performance (8456), Design and Technology (8457), or Youth Drama (8458). Also see University Requirements for endorsement.

**Theatre Generalist
Specialization Electives (8455)**

Select from any electives in Performance (8456), Technology and Design (8457), Youth Drama (8458), or Theatre Management (8459).

**Performance Specialization
Electives (8456)**

TH 245, Basic Acting: Movement (2)	
TH 246, Basic Acting: Voice (2)	
TH 270, Theatrical Makeup (2)	
TH 301, Production Application (3+)	
TH 312, Creative Dramatics (3)	
TH 329, Directing I (3)	
TH 330, Playwriting (4+)	
TH 332, New Play Production (3+)	

TH 333, Stage Combat (2)	
TH 342, Voice and Dialects (2)	
TH 343, Singing for Actors (1+)	
TH 350, Theatre Management I (3)	
TH 351, Theatre Management II (3)	
TH 352, Stage Dance (2#)	
TH 360, Stage Management (3)	
TH 344, Intermediate Acting I (3)	
TH 345, Intermediate Acting II (3)	
TH 401, Production Application (3+)	
TH 429, Directing II (3)	
TH 430, Playwright's Workshop (4+)	
TH 444, Acting Styles (4+)	
TH 445, Audition Techniques (2)	
TH 475, Acting for Film and Television (3)	
Th 492, Practicum in Producing and Touring Theatre (3#)	
Total	30

+may be repeated for credit
#maximum credits in specialization

**Design and Technology
Specialization Electives (8457)**

TH 261, Costume Technology (2)	
TH 266, Theatre Drafting (2)	
TH 267, Scene Technology (2)	
TH 268, Lighting Technology (2)	
TH 270, Theatrical Makeup (2)	
TH 301, Production Application (3*)	
TH 332, New Play Production (3)	
TH 350, 351, Theatre Management I, II (3, 3)	
TH 353, Stage Properties (3)	
TH 354, Scene Painting (3)	
TH 356, Theatre Sound (3)	
TH 360, Stage Management (3)	
TH 361, Stage Costuming (3)	
TH 366, Elements of Theatre Design and Rendering (3)	
TH 367, Stage Scenery (3)	
TH 368, Stage Lighting (3)	
TH 384, Puppetry (3)	
TH 401, Production Application (3+)	
TH 461, Costume Design (4)	
TH 465, Costume and Fashion Drawing (3)	
TH 467, Scenic Design (4)	
TH 468, Lighting Design (4)	
TH 489 Career and Portfolio (3)	
Total	30

*May be repeated for credit

**Youth Drama Specialization
Electives (8458)**

TH 207, Introduction to Children's Drama (3)	
TH 245, Basic Acting: Voice (2)	
TH 246, Basic Acting: Movement (2)	
TH 301, Production Application (3)	
TH 312, Creative Dramatics (3)	
TH 313, Children's Theatre (3)	
TH 330, Playwriting (4)	
TH 332, New Play Production (3)	

TH 333, Stage Combat (2)
 TH 342, Voice and Dialects (2)
 TH 350, 351, Theatre Management I, II (3, 3)
 TH 352, Stage Dance (2)
 TH 360, Stage Management (3)
 TH 344, 345, Intermediate Acting I, II (3, 3)
 TH 384, Puppetry (3)
 TH 401, Production Application (3)
 TH 420, Drama in the Schools, K-12 (5)
 TH 429, Directing II (3)
 TH 430, Playwright's Workshop (4)
 TH 444, Acting Styles (4)
 TH 492, Practicum in Producing and Touring Theatre (3 #)

#Maximum in specialization

Theatre Management Specialization Electives (8459) (Minor Only)

Take these courses:

TH 261, Costume Technology (2) OR
 TH 267, Scene Technology (2) OR
 TH 268, Lighting Technology (2)
 TH 350, Theatre Management (3)
 TH 351, Theatre Management (3)
 TH 360, Stage Management (3)

PLUS select two from the following courses:

ECON 101, Economic Issues (5)
 ADMG 146, Basic Accounting (5)
 ECON 201, Principles of Economics:
 Micro (5)
 ACCT 301, Financial Accounting
 Analysis (5)
 MKT 360, Principles of Marketing (5)
 MGT 380, Organizational Management (5)
 HRM 381, Management of Human
 Resources (5)

Theatre Arts Courses

TH 101. **Appreciation of Theatre and Film** (4). Viewing, discussing, and comparing film and live theatre performance.
 TH 107. **Introduction to Theatre** (4). Overview of the basic elements of the theatre arts and dramatic structure, and the environment for production of plays. Attendance at assigned outside events is required.
 TH 166. **Theory of Play Production** (3). Theories of production are examined through basic script analysis, protocol procedures, job descriptions, and communication.
 TH 207. **Introduction to Children's Drama** (3). Prerequisite, TH 166 or permission of instructor. History and aesthetics of children's drama: includes storytelling, improvisational theatre, production techniques, touring theatre, and puppetry.

Appropriate for students in education, leisure services, and theatre.

TH 244. **Basic Acting** (2). Theory and practice of essentials of acting craft, including subtext, objectives, and beginning character and play analysis. Two hours lecture and two hours laboratory per week. Formerly DR 269 and TH 269.1. Students may not receive credit for both.

TH 245. **Basic Acting: Movement** (2). Prerequisite, TH 244 or permission of instructor. Exploration of various basic physical characterization techniques and movement skills, including observation and imitation, physical improvisation, and mask work. Two hours lecture and two hours laboratory per week. Formerly TH 269.2. Students may not receive credit for both.

TH 246. **Basic Acting: Voice** (2). Prerequisite: TH 245 or permission of instructor. Exploration of basic principles and practice of vocal production, including relaxation, support, resonance, range, interpretation, and articulation. Two hours lecture and two hours laboratory per week. Formerly TH 269.3. Students may not receive credit for both.

TH 261. **Costume Technology** (2). Prerequisite, TH 166 or permission. Basic theory and study of costume construction and fabrication for the theatre. Emphasis on terminology, safe operating procedures of sewing machinery, basic stitches, and fabric identification.

TH 266. **Theatre Drafting** (2). Prerequisites, TH 107, TH 166, and permission of instructor. Supervised study and practice drafting theatrical sets and properties. Formerly TH 355. Student may not receive credit for both.

TH 267. **Scene Technology** (2). Prerequisites, TH 166 or permission of instructor. Scene construction, rigging, painting and shifting techniques. Participation in production work is required.

TH 268. **Lighting Technology** (2). Applied study of lighting instruments, lighting accessories, hanging, cabling, focusing, lighting control systems, safety, maintenance and inventory control. Participation in production work is required.

TH 270. **Theatrical Makeup** (2). Prerequisite, TH 107 or permission of instructor. The history, functions, materials and techniques of makeup as a theatrical art. Production application required.

TH 298. **Special Topics** (1-6).

TH 300, 400. **Rehearsal and Performance** (1-2) Open only to non-majors participating in Theatre Arts productions. May be repeated for credit.

TH 301, 401. **Production Application** (3,3). Skills learned in the classroom are applied to production work for public presentation. Different sections will be offered for participants in each area of the production team. May be repeated for a total of 15 credits each.

TH 312. **Creative Dramatics in School and Leisure** (3). Theory and practice of dramatic improvisation as a stimulus for learning and creative recreation. Focus on exploratory drama for language acquisition and social interaction.

TH 313. **Children's Theatre** (3). Prerequisite, TH 107 or permission of instructor. Elements of creating and producing the theatre event for the child audience. Play production for children, improvisation in playwriting and story theatre. Formerly DR 473. Students may not receive credit for both.

TH 329. **Directing I** (3). Prerequisites, TH 107, TH 166, and TH 244. Basic theories, script analysis and fundamentals of directing the play.

TH 330. **Playwriting** (4). Prerequisite, TH 107 or permission of instructor. Fundamentals and practice in dramatic writing techniques and styles. May be repeated to a maximum of eight credits. Formerly DR 410. Students may not receive credit for both.

TH 332. **New Play Production** (3). Prerequisite, permission of instructor. An exploration of the problems and techniques specific to the production of original, student-written plays. Participation in public performances of new plays, including weekend and evening activities is required. May be repeated for credit.

TH 333. **Stage Combat** (2). Prerequisite, TH 244 or permission of instructor. The study and practice of basic skills, techniques, and safety factors used in staging and performing violence for the stage and media. Focus is on falls, rolls, and unarmed combat. May include use of one historical weapon.

TH 342. **Voice and Dialects** (2). Prerequisite, TH 246. Advanced voice training for the actor. Study of phonetics, scansion, phrasing, and dialects.

TH 343. **Singing for Actors** (1). Prerequisite TH 246 or permission of instructor. Study of the mechanics of singing as applied to presentation of theatrical show music. May be repeated to a maximum of 6 credits.

TH 344. **Intermediate Acting I** (3). Prerequisites, TH 107 and TH 246 or permission of instructor. Character interpretation and scene study through script analysis and scene work. Formerly DR 369 and TH 369.1. Students may not

- receive credit for both. TH 344 and TH 345 to be taken in sequence.
- TH 345. Intermediate Acting II (3).** Prerequisites, TH 107 and TH 344 or permission of instructor. Character interpretation and scene study through script analysis and scene work. Courses are to be taken in sequence. Formerly TH 369.2. Students may not receive credit for both.
- TH 350. Theatre Management (3).** Prerequisites TH 107 and TH 166 or permission of instructor. Courses are to be taken in sequence. Policy and practice of theatre administration including budgets, contracts, box office, purchasing, staffing, marketing and audience development. Formerly TH 350.1 and DR 460. Students may not receive credit for both.
- TH 351. Theatre Management (3).** Prerequisites TH 107 and TH 166 or permission of instructor. Courses are to be taken in sequence. Policy and practice of theatre administration including budgets, contracts, box office, purchasing, staffing, marketing and audience development. Formerly TH 350.2 and DR 460. Students may not receive credit for both.
- TH 352. Stage Dance (2).** Study and directed practice of individual and group dance in modern musical and opera productions. Open to all students participating in dramatic productions. Formerly DR 310. Students may not receive credit for both.
- TH 353. Stage Properties (3).** Prerequisite, TH 107, TH 166, and TH 267 or permission of instructor. Research, methodology, design and construction of stage props and furniture.
- TH 354. Scene Painting (3).** Study in the methodology and skills of scene painting, materials, and techniques.
- TH 356. Theatre Sound (3).** Prerequisite, TH 166. Design, operation and technology of theatrical sound systems.
- TH 360. Stage Management (3).** Prerequisites, TH 166 and 269.1 or permission of instructor. Techniques, communication methodology, resources, practices and technical training for the stage manager.
- TH 361. Stage Costuming (3).** Prerequisite, TH 261 or permission of instructor. Further study of construction and fabrication for the stage. Emphasis on patterning, dyeing, and distressing costumes for the stage.
- TH 363. Theatre History I (4).** Prerequisite, TH 107 or permission of instructor. From origins to the Elizabethan Era. Formerly TH 363.1. Students may not receive credit for both.
- TH 364. Theatre History II (4).** Prerequisite, TH 107 or permission of instructor. From the Elizabethan period to Ibsen. Formerly TH 363.2. Students may not receive credit for both.
- TH 365. Theatre History III (4).** Prerequisite, TH 107 or permission of instructor. From Ibsen to the present. Formerly TH 363.3. Students may not receive credit for both.
- TH 366. Elements of Theatre Design and Rendering Techniques (3).** Prerequisite, permission of instructor. Study of line, color, movement, texture, mass and proportion in theatre design and conceptualization. Rendering techniques for stage design in a wide range of media.
- TH 367. Stage Scenery (3).** Prerequisites, TH 166 and TH 267. Advanced stage scenery construction techniques are studied and applied.
- TH 368. Stage Lighting (3).** Prerequisites, TH 266 and TH 268 or permission of instructor. Study of electricity, optics, color, distribution, projecting, drafting, lighting paperwork, and methods for lighting productions.
- TH 371. Greek and Roman Drama (4)** Prerequisite, TH 107 or permission of instructor. Major playwrights and plays related to historical and social trends.
- TH 373. American Drama (4).** Prerequisite, TH 107 or permission of instructor. Major playwrights and their works.
- TH 375. Asian Theatre (4).** Prerequisite, TH 107 or permission of instructor. Survey of the traditional theatre, puppetry and dance-drama forms of Asia. Historical development. Cultural and aesthetic aspects of the text in performance. Influence on contemporary world theatre.
- TH 377. Staging Gender (4).** Concepts of gender and their historical development are examined through analysis of dramatic literature, films and contemporary performance culture.
- TH 381. British Drama (4).** Prerequisite, TH 107 or permission of instructor. Origins to present. TH 381 and ENG 381 are equivalent courses. Students may not receive credit for both.
- TH 382. Ethnic Drama (4).** Study of contemporary American multi-cultural plays by people of color and other ethnic groups.
- TH 383. Contemporary World Drama (4).** Prerequisite, TH 107 or permission of instructor. Selected Post First World War plays from around the world are studied. Formerly DR 470. Students may not receive credit for both.
- TH 384. Puppetry (3).** Prerequisite, TH 166 or permission of instructor. Survey of puppetry principles and their application to the classroom, recreational facility and theatre. Production techniques. Analysis of literature adaptable to theatre form.
- TH 393, 493. Theatre Laboratory (1,1).** Prerequisite, permission of instructor. Practical experience in all aspects of theatre production to better prepare for career opportunities. Each may be repeated for a total of three credits to a maximum of six credits.
- TH 398. Special Topics (1-6).**
- TH 400. Rehearsal and Performance (1-2).** Open only to non-majors participating in Theatre Arts productions. May be repeated for credit.
- TH 401. Production Application (3).** Skills learned in the classroom are applied to production work for public presentation. Different sections will be offered for participants in each area of the production team. May be repeated for a total of 15 credits.
- TH 420. Drama in the Schools K-12 (5).** Prerequisite, TH 107 and TH 166. Theatre appreciation, play production, curriculum development, verbal and non-verbal skills, traditions and trends in the application of drama education in the K-12 classroom are explored and practiced.
- TH 429. Directing II (3).** Prerequisites, TH 329 and permission of instructor. Script study emphasizing the specific artistic and logistical preparation involved in directing a play. Culminates in directing selected scenes.
- TH 430. Playwright's Workshop (4).** Prerequisite, TH 330 or permission of instructor. Practice in dramatic writing through staged reading or workshop production of an original work. May be repeated to a maximum of eight credits.
- TH 444. Acting Styles (4).** Prerequisites, TH 344 and permission of instructor. Performance skills applied to special texts, especially Shakespeare, and including other heightened texts and stylized comedy. TH 444 and TH 544 are equivalent courses. Student may not receive credit for both. May be repeated for a maximum of 8 credits.
- TH 445. Audition Techniques (2).** Prerequisite, TH 344. Exploration and practice of advanced techniques and materials required for professional auditions. Formerly TH 345. Students may not receive credit for both.
- TH 452. History of Fashion (5).** Historical changes in fashion and costume design from Egyptian period through Eastern civilization to present. Social, political and religious influences on fashions. FCSA 452 and TH 452 are equivalent courses. Students may not receive credit for both.
- TH 461. Costume Design (4).** Prerequisites, TH 261, TH 361, and TH 366 or permission of instructor. Basic principles of design related to theatrical costumes. The role of the costume designer in planning and

developing a sketch from the initial reading of the script through production, research, production meetings, and rendering technique. Formerly DR 361 and DR 461. Students may not receive credit for more than one.

TH 465. Costume and Fashion Drawing (3). Sketching design ideas for theatrical costumes and street clothing in three dimensional form with textural effects and color to present a realistic appearance on paper.

TH 467. Scene Design (4). Prerequisites, TH 267, TH 366 and TH 367 or permission of instructor. Study, research, practice and applied use of scenic design techniques and theory.

TH 468. Lighting Design (4). Prerequisites, TH 366 and TH 368 or permission of instructor. Conceptualization, design and application of theatrical lighting using contemporary stage lighting practices.

TH 475. Acting for Film and Television (3). Prerequisite, TH 344. Study and practice of the techniques of performing for the camera and of recording voice-overs. May be repeated for credit.

TH 487. Theatre Pedagogy (4). Prerequisite, permission of the instructor. Student will be given individualized instruction in teaching practices and will participate in journal writing, critiquing, counseling, coaching, advising, leading discussion and grading. May be repeated for credit up to 8 credits. TH 487 and TH 587 are equivalent courses.

TH 489. Career & Portfolio Preparation (3). Prerequisites, declared Theatre major, junior or senior status. Techniques and practice in preparation of professional portfolio, resumes and letters of application for employment in the entertainment industry.

TH 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

TH 491. Workshop (1-6).

TH 492. Practicum in Producing and Touring Theatre (3, 6, 12.) Prerequisite, permission of instructor. Lecture, demonstration, and participation in producing and touring a show. A maximum of 3 credits may be applied to the specialization.

TH 495. Senior Research Project (2). Prerequisite, permission of advisor and majority consent of the theatre faculty. Senior students shall present a research paper in a major area of interest. May be repeated one time for credit.

TH 496. Individual Study (1-6). Prerequisite, TH 107 or permission of instructor.

TH 498. Special Topics (1-6).

TH 499. Seminar (1-5).

UNIVERSITY STUDIES

University Studies incorporates three distinct areas. The first area includes the UNIV 101, 102, and 103 courses. These courses are ancillary courses that enable students to build skills needed to succeed at CWU. These courses allow students to learn about the general education program, graduation requirements, develop skills for academic and social success, learn about major and minor programs, and how to approach developing an appropriate career. UNIV 101 is a required course for all students who have 44 or fewer transfer credits.

UNIV 101. Academic Advising Seminar (1).

This course is designed for students to learn about the mission of the general education program and majors in order to make informed academic decisions and discover opportunities for personal growth.

UNIV 102. College Survival Skills (2).

Course will teach essential study skills for succeeding in and graduating from college. Students will learn how to develop habits that lead to academic success. Formerly OCED 110, Career Exploration.

UNIV 103. Career Exploration (2). Designed to assist students in researching and assessing their career goals through classroom coursework and career-related interest and personality inventories. Formerly OCED 110.

The second area is the Enrichment Program which includes UNIV 297, 497, and 597. These courses are designed to encourage student exploration and intellectual enrichment and are only offered during summer quarter. Enrichment courses are not intended to substitute for either General Education requirements or major or minor requirements. These courses are a part of a student's enrollment planning—specifically as free electives. Only eight enrichment course credits can be counted toward a student's elective degree requirements.

UNIV 297. Enrichment Course (1).

Enrichment course on various topics for freshmen and sophomores to broaden their interest areas. Grade will be S or U.

UNIV 497. Enrichment Course (1). An enrichment course on varying topics for upper-division students to explore more deeply issues of academic interest. Grade will be S or U.

UNIV 597. Enrichment Course (1). An enrichment course on varying topics for graduate students to explore more deeply issues in their areas of academic focus. Grade will be S or U.

The third area includes courses dedicated to academic service learning experiences.

UNIV 109. Introduction to Service Learning (2). The student will use volunteer service to identify and explore career interests and meet community needs.

UNIV 309. Service Learning (2). Student will use program of study content knowledge to improve a community situation. UNIV 309 and EDCS 309 are equivalent courses. Formerly FCSG. May be repeated for credit.

WOMEN STUDIES

Director: Bang-Soon Yoon

Psychology Building 473

General Program Information

Women Studies is an interdisciplinary program which provides a frame of reference for understanding the contemporary and historical experience, roles, and contributions of both women and men. With the increasing participation rate of women in the labor force and politics, this subject is becoming increasingly important in preparing all students for life and work in the 21st Century and beyond. The objectives of women studies are:

1. To explore existing knowledge about women in a variety of disciplines.
2. To critically assess the traditional disciplines in the light of new data concerning women.
3. To provide an academic foundation for students planning careers in women studies or related fields.
4. To promote research about women within existing disciplines.

Women Studies offers an interdisciplinary minor as described below. With approval of the Director of Women Studies, the student will select appropriate electives to meet personal and professional goals.

With faculty advisement, interested students may construct individualized majors in Women Studies through the interdisciplinary major program.

Women Studies Minor (8650)

Required Courses	Credits
WS 201, Introduction to Women Studies	5
Select from the following:	11-15
ANTH 356, Gender Roles in Cross-Cultural Perspective (4)	
ENG 335, Studies in Women's Literature (4)	
HIST 346, Women in American History (5)	
POSC 311, Women and Politics (5)	
PSY 483, Psychology of Women (3) (Prerequisite, PSY 101 (5))	
SOC 356, Sex Roles in Society (5)	
Department approved electives. Electives may include courses not selected as requirements from the list above. Possible electives are ENG 230, SOC 388, as well as special topics, individual study, and seminar courses in women studies and related departments.....	5-9

Total 25

Women Studies Courses

- WS 201. Introduction to Women Studies (5).**
A survey of women studies from an interdisciplinary perspective. Basic terms, concepts, theories and research methodologies will be introduced. Gender-related issues will be examined from the historical, cross-cultural and cross-national perspectives.
- WS 491. Workshop (1-6).**
- WS 496. Individual Study (1-6).** May be repeated.
- WS 498. Special Topics (1-6).**
- WS 499. Seminar (1-5)** May be repeated.

PRE-PROFESSIONAL PROGRAMS

These programs are planned for two groups of students — those who want one or two years of college work prior to entering an occupation and those who want to do preprofessional work for one, two, three or four years before entering a professional school, university or college.

The programs described are not to be considered unalterable. They represent patterns that generally agree with the requirements of many professional schools. Since there are many variations in the requirements of the professional schools, students should, after consulting the catalog of the institution from which they expect to earn a degree, select courses required by that institution.

The following pre-professional programs

are offered: Pre-Dentistry; Pre-Dietetics; Pre-Engineering; Pre-Law; Pre-Medicine; Pre-Occupational Therapy; Pre-Optometry; Pre-Pharmacy; Pre-Physical Therapy; Pre-Veterinary.

Pre-Dentistry

Advisor: Dr. Linda Raubeson
Department of Biological Science
Science Building 338L, (509) 963-2734

Most students enter dental school with a Bachelor's degree. A Pre-dentistry major is not offered. Any major is acceptable provided the dental school admission requirements are met. Most students major in Biology or Chemistry. Schools vary in which science classes are required. A background in the social sciences and humanities is also expected; however, there are no firm expectations for coursework in these subjects beyond English. The ADA web site www.ada.org/prof/ed/index.asp provides links to individual dental schools. Pre-dental students are encouraged to learn the specific requirements for their potential schools. Students applying to dental school must have taken the Dental Aptitude Test. Information on the DAT is also available on the ADA web site. Courses marked below with an asterisk (*) should be completed prior to attempting the DAT. Completing additional coursework in Biology should also improve DAT performance.

Required at Most Dental Schools:

Required Courses	Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 361, 361LAB, 362, 363, 363LAB, Organic Chemistry.....	8-13
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB, General Physics.....	15
BIOL 110, 111, 112, 220, General Biology ...	20

Required at Some Dental Schools:

Required Courses	Credits
CHEM 431, 431LAB, 432, Biochemistry.....	8
MATH 153, 154, Pre-Calculus.....	10
BIOL 323, Microbiology	5
One additional quarter of Microbiology, e.g., BIOL 426, Medical Microbiology	

Recommended

BIOL 321 (Genetics).....	5
BIOL 354, General Vertebrate Embryology.....	5
BIOL 355 AND BIOL 356, Human Anatomy & Physiology OR	
BIOL 455, Zoophysiology.....	10-11
Additional coursework in biology, e.g. BIOL 421, BIOL 422, BIOL 423, BIOL 425, and/or BIOL 454	

Pre-Dietetics

Advisor: Dr. Ethan Bergman RD, CD, FADA
Department of Family and Consumer Sciences
Michaelsen Hall 135, (509) 963-2366

A registered dietitian (RD) is an expert on foods and how they affect human health. An RD is registered by the American Dietetic Association (ADA) as an individual who has completed an approved or accredited four-year undergraduate program. The B.S. in Food Science and Nutrition (Nutrition and Dietetics specialization) is a developmentally accredited program. In addition, the individual must complete a 900+ hour accredited supervised practice experience at one of over 200 dietetic internship sites. Finally, individuals must then pass the registration examination to attain the RD credential. Please see the advisor for more information. Dietitians may work in hospitals, clinics, and nursing homes as clinical dietitians, for government and public health agencies as community dietitians, and in food service departments of hospitals, schools, nursing homes, and restaurants as management dietitians. In addition, dietitians also are employed as researchers, educators, and as consultants in a variety of settings.

Pre-Engineering

Advisors:
Associate Professor Michael Braunstein
Lind Hall 203D, (509) 963-2761
Assistant Professor Sharon Rosell
Lind Hall 203C, (509) 963-2757
Department of Physics

Most colleges of engineering accept students into their programs only after they have successfully completed a pre-engineering course of study. This usually takes the first two or three years of a student's college career, and can be done at a community college, at CWU, or at another university. Then the student must transfer to the engineering school of his or her choice and apply for admission to the particular engineering program wanted. He or she will graduate from that college and therefore must satisfy its requirements.

The course requirements in engineering vary considerably for different fields of engineering and for various colleges of engineering. The most important step a Pre-Engineering student can take is to consult the catalog of the particular college of engineering the student hopes to attend and then to plan a program at CWU to satisfy as many specific requirements of that college as possible. Students whose plans are not definite are advised to follow the typical

first-year program outlined below and have a firm choice of the Engineering Program by the beginning of their second year. The Pre-Engineering advisor can assist you in these matters.

Students selecting this program must have completed a full year of high school calculus, or have a satisfactory score on the Math Placement Test Form PC, which is given by the Department of Mathematics, or MATH 154. These are prerequisites to MATH 172.

The Department of Physics also offers a Bachelor of Science, Physics major - Engineering, in which the student receives degrees in Physics and Engineering. Consult the Chair, Department of Physics, or Pre-Engineering Advisors for additional information about this program.

First Year Courses	Credits
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB.....	15
MATH 172, 173, 272.....	15
IET 165.....	4
CS 177.....	4
ENG 101, 102.....	8
Electives.....	5
Total	51

Pre-Law

Advisor: Professor Mathew Manweller
Department of Political Science
Psychology Building 481, (509) 963-2396

The attainment of a law degree ordinarily involves a seven-year program - the completion of an undergraduate degree (four years) followed by three years at law school. During the final undergraduate year, the student aspiring to pursue a career in law should plan to take the Law School Admission Test (LSAT) and make application to law schools.

Law schools do not require a particular major or courses as a condition for admission. About half of those admitted to law school have taken degrees in Political Science because that is the discipline which deals most directly with the institutions that make and enforce law. Other common undergraduate majors found in the law school population are History, English, Economics, and Business. The pre-law student should seek a course of study which enhances his or her verbal comprehension and expression and which helps attain a critical understanding of the human institutions and values with which the law deals.

The Political Science Department offers an advisory program designed to assist students in choosing and gaining admission to law schools. The pre-law student should carefully plan his or her program in close consultation with a pre-law advisor.

Pre-Medicine

Advisor: Dr. Sheldon Johnson
Department of Biological Sciences
Science Building 338H, (509) 963-2800

This program prepares students for entering professional schools of medicine (M.D. or D.O.). In addition to the required science courses, a broad humanities and liberal arts background is encouraged. Although Pre-Medical students usually major in the sciences (85 percent), any arts and science major is acceptable. Regardless of their academic major, pre-medicine students must work closely with the Pre-Med advisor in order to insure their proper preparation for medical school. The University's Pre-Medicine program is supported by approximately 20 full tuition and books scholarships, which are based on academic excellence, not need.

Pre-Occupational Therapy

Advisor: Dr. David Darda
E-mail: dardad@cwu.edu
Department of Biological Sciences
Science Building 236E, (509) 963-1333

The Pre-Occupational Therapy program is a program through which a student can prepare for admission to a professional occupational therapy program at another institution. CWU does not offer a degree program in occupational therapy or pre-occupational therapy, but does offer all prerequisite courses necessary for successful admission to the professional phase at another university.

Most Pre-Occupational Therapy students will complete their undergraduate degree at CWU and then apply to the program(s) of their choice. Detailed information concerning appropriate undergraduate coursework and professional occupational therapy programs in the Pacific Northwest is available in the Department of Biological Sciences.

Pre-Optometry

Advisor: Dr. Linda Raubeson
Department of Biological Sciences
Science Building 338L, (509) 963-2734

Optometrists are primarily involved in testing eyesight for the purpose of prescribing corrective lenses. Students interested in optometry usually obtain a four-year degree prior to entering optometry school. Alternatively, students may take a three year Pre-Optometry program at Central and then transfer to the optometry school of their choice where they will complete a two or three year program. The

19 schools in the U.S. and Canada offering professional optometry degree programs vary in their entrance requirements. Therefore, students interested in Pre-Optometry should determine the specific requirements of the optometry school to which they wish to transfer. Most schools require some experience (observation) with optometry prior to application. Social science, humanities, and writing courses are usually required in addition to the science courses listed below. The OAT (Optometric Aptitude Test) scores are required to apply to most schools. For links to optometry schools, information about the OAT, application procedures and other useful information, see the Association of Schools and Colleges of Optometry web site:
<http://www.opted.org>

Commonly Required Courses

BIOL 110, 112, 220 (or 320), 323.....	20
BIOL 355, 356.....	10
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB.....	15
CHEM 361, 361LAB, 362.....	8
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB.....	15
PSY 101.....	5
1 quarter calculus.....	5
1 quarter statistics.....	5

To earn a B.A. in biology the following courses would also be required:

BIOL 111, 321, 499S.....	11
1 quarter of ecology.....	5
(BIOL 360 or 420 or 464)	

Pre-Pharmacy

Advisor: Dr. Carin Thomas
Department of Chemistry
SCI 302G, (509) 963-2815
Fax: (509) 963-1050, e-mail:
cthomas@cwu.edu

A pre-pharmacy program of study prepares students for admission into professional programs at any university granting a pharmacy doctoral degree (Pharm-D). Central Washington University does not offer a degree program in pharmacy, but does offer all prerequisite courses necessary for admission to pharmacy programs at other universities.

An example pre-pharmacy program of study designed to satisfy prerequisites for admission into the University of Washington School of Pharmacy is listed below. For information regarding admission prerequisites for other universities, or for more details, contact the pre-pharmacy advisor.

Required Courses	Credits
BIOL 110, 111, 112, and 220 or 320, General Biology.....	20
BIOL 323, Microbiology	5
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 361, 361LAB, 362, 363, 363LAB, Organic Chemistry	13
ENG 101, 102, and 301, English Composition.....	11
MATH 170, Intuitive Calculus OR MATH 172, Calculus	5
MATH 311, Statistical Concepts and Methods	5
Minimum Humanities electives	10
Minimum Social Sciences electives	10
Other electives	varies

**Minimum Pre-pharmacy credits
for admission 94**

Pre-Physical Therapy

Advisor: Dr. David Darda
E-mail: dardad@cwu.edu
Department of Biological Sciences
Science Building 236E (509) 963-1333

The Pre-Physical Therapy program is a program through which a student can prepare for admission to a professional physical therapy program at another institution. CWU does not offer a degree program in physical therapy or pre-physical therapy, but does offer all prerequisite courses necessary for successful admission to the professional phase at another university.

Most Pre-Physical Therapy students will complete their undergraduate degree at CWU and then apply to the program(s) of their choice. Detailed information concerning appropriate undergraduate coursework and professional physical therapy programs in the Pacific Northwest is available in the Department of Biological Sciences.

Pre-Veterinary

Advisor: Dr. Patrick Bryan
Department of Biological Sciences
Science Building 338K, (509) 963-3590

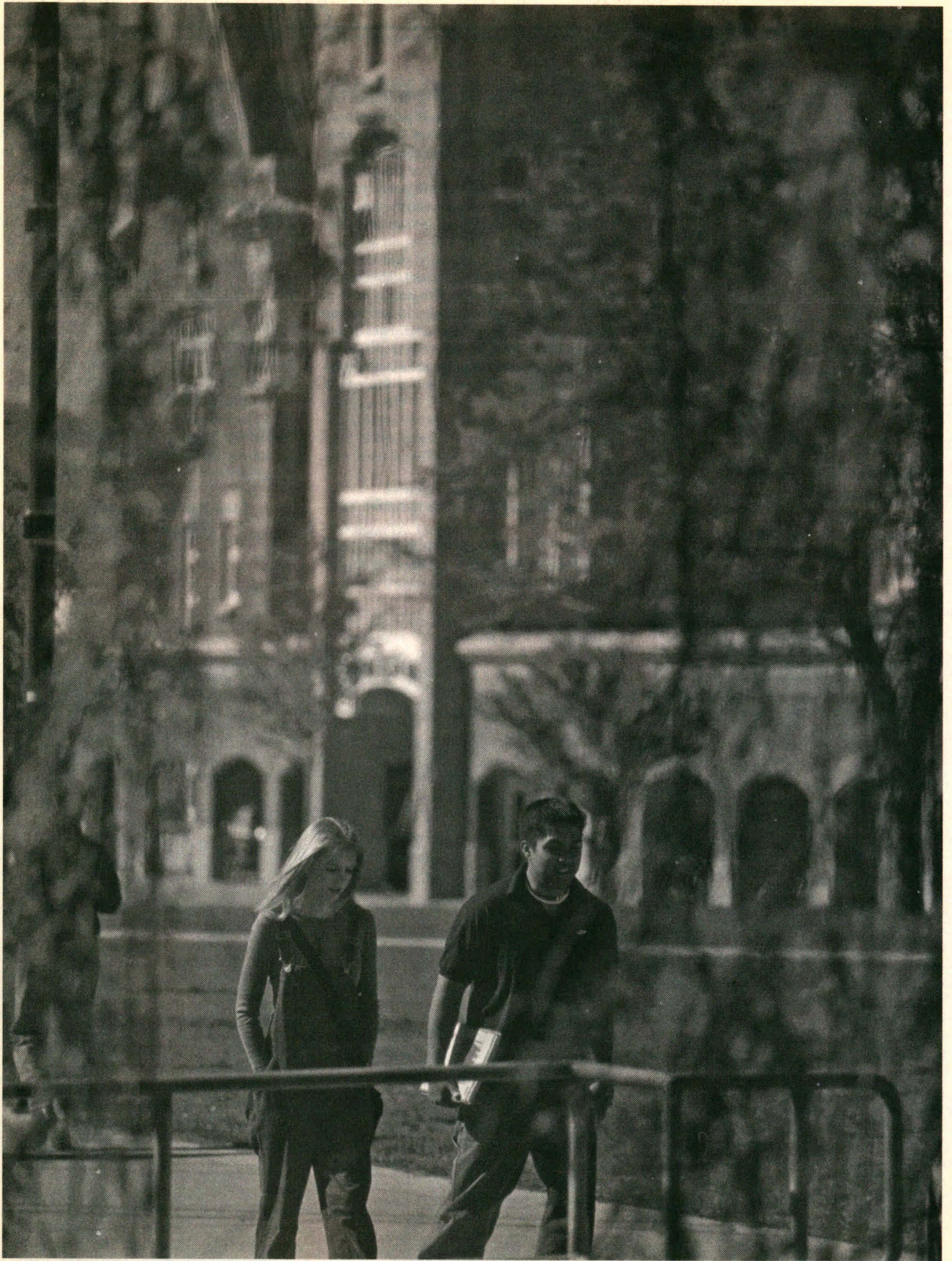
A Pre-Veterinary program at Central Washington University should prepare the

student for admission into a veterinary medicine program. Students planning a career in veterinary medicine must complete the following before applying to a college of veterinary medicine. (Note: BIOL 499 is required for a B.A. or B.S.)

Required Courses	Credits
BIOL 110, 111, 112, 220, General Biology ...	20
BIOL 321, Genetics.....	5
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry	15
CHEM 361, 361LAB, 362, Organic Chemistry 8	8
CHEM 431, 432, Biochemistry.....	6
MATH 153, 154, Pre-Calculus.....	10
PHYS 111, 111LAB, General Physics	5
Minimum Natural Science and Mathematics credits for admission to a College of Veterinary Medicine	69
Department- approved electives: General university requirements for graduation	45

**Total Pre-Veterinary credits
required for admission 115**





Central Washington University provides quality graduate programs in selected fields, taught by a faculty committed to excellence in teaching and research. A hallmark of this University is to offer our graduate students:

- Small classes
- Opportunities to work closely with professors
- An excellent learning environment
- Low tuition
- Hands-on research experience
- An attractive setting in a friendly community

Administration and Organization

The Office of Graduate Studies and Research welcomes visits and inquiries from graduate students and prospective graduate students. Our staff is here to assist the academic community, both in the area of graduate studies as well as in the sphere of grants and sponsored research.

Associate Vice President:

Wayne S. Quirk

Associate Director of Sponsored

Research: Roger Fouts

Research and Sponsored Programs Administrator: Julie Guggino

Admissions/Records and Graduation

Program Support Supervisor: Christie Fevegeon

Office Assistant: Barbara Sisko

Address: Barge Hall 305
Telephone: (509) 963-3103
Fax: (509) 963-1799
E-mail: masters@cwu.edu

Web Site

<http://www.cwu.edu/~masters>

Business hours: 8 a.m. - 5 p.m., Monday - Friday (Pacific Time), except holidays. If you call during non-business hours, be sure to let us know when and where to reach you and we will return your call as soon as possible.

General Information

The graduate experience at CWU is challenging, rewarding, and exciting. But, like every quality experience, it is subject to certain rules and policies to insure that high academic standards are maintained. Below, we present information about CWU's graduate programs. We seek to ensure that graduate students are fully apprised of the policies and procedures governing student progress. It is the responsibility of graduate students to familiarize themselves with these and the policies of the programs in which they are enrolled.

Central Washington University believes in equal educational and employment opportunity for all without regard to race, color, creed, national origin, sex, age, marital status or any sensory physical or mental handicap.

Additional information concerning university policies and regulations applicable to graduate programs, including accreditation, institutional memberships, grading practices, mission and roles, and tuition and fees, will be found in various sections of this university bulletin. Please consult the Table of Contents or catalog index for further information.

Definition of a Graduate Student

A graduate student is anyone duly admitted to graduate study at CWU, who is officially enrolled in a graduate program here. Graduate programs offered include master's degree programs, fifth year and other certification programs, and non-degree study as a resident or visiting graduate student.

Programs of Graduate Study

Graduate Degrees. Central Washington University offers the following graduate degrees:

Master of Arts

Art
English: Literature
English: TESL/TEFL
History
Individual Studies
Theatre Production

Master of Arts for Teachers

Mathematics

Master of Education

Administration
Individual Studies
Instructional Leadership
Master Teacher
Reading Specialist
School Counseling
School Psychology
Special Education

Master of Fine Arts

Art

Master of Music

Music

Master of Professional Accountancy

Master of Science

Biology
Chemistry
Counseling Psychology

Engineering Technology
Experimental Psychology
Family and Consumer Sciences
Geology
Individual Studies
Organization Development
Health, Human Performance, and Recreation
Resource Management

The following programs are on reserve status and are not accepting new students: M.Ed., Science Education; M.Ed., Social Science; M.S., Mathematics, M.Ed., Business and Marketing Education.

Graduate Certificate Programs

In addition to the degree programs available CWU offers the following graduate certificate programs. See Graduate Certificate Programs below for details.

Renewal of Initial or Residency Certificate
Fifth-year of Study for Continuing or Professional Certificate
Endorsement-Only Program
Initial Principal's Certificate
Continuing Principals' Certificate
Initial Program Administrator
Continuing Program Administrator
Educational Staff Associate Certificate
School Counselor
School Psychologist

APPLICATION AND ADMISSION TO GRADUATE STUDY

Admissions Information

Central Washington University offers admission to applicants who have high potential for success in their chosen graduate disciplines. We seek to admit people with diverse backgrounds in order to enhance the learning environment for all students.

Admissions decisions are based upon a combination of factors. These include grade point average, letters of recommendation from professors or others able to critically assess an applicant's ability to succeed in a graduate program, a written statement of purpose, standardized test scores (if applicable), academic preparation for work in the proposed field, and the applicant's interests as matched with those of faculty.

Types of Admission

CWU distinguishes three types of admission: Regular, Probationary, and Conditional.

Regular. To be eligible for Regular Admission, an applicant must have earned a

bachelor's degree from a recognized four-year college or university in the United States or the equivalent from an institution abroad. The applicant must demonstrate, in the opinion of the faculty and the Associate Vice President of Graduate Studies and Research, the ability to successfully complete a master's degree, and must have achieved at least a 3.0 (B) average in all course work attempted during the last 90 quarter hours (60 semester hours) of study.

Probationary. An applicant who does not meet the minimum admissions requirements, but who shows promise of success in a graduate program, will be considered for admission. He/she may be admitted on probationary status, based on departmental recommendations and a favorable review by the Associate Vice President of Graduate Studies and Research. If admitted, the applicant is placed on probation for one quarter, during which time he/she must complete at least 10 credits of course work approved by the home department. A grade point average of 3.0 (B) or more is required. Upon meeting this requirement, and with the favorable recommendation of the department, the student will be fully admitted and allowed to continue toward candidacy for a degree. If the student is unable to achieve a 3.0 GPA, he/she will be dropped from the program.

Conditional. An applicant may also be conditionally admitted to master's programs when he/she does not fully meet admission requirements. Typically such admittees lack certain field-related experiences and/or required background knowledge. An applicant may also be admitted to this category pending receipt of the official transcript(s) indicating completion of the bachelor's degree. A conditionally admitted student will achieve regular status when the condition has been satisfied and the admitting department recommends advancement to regular status.

International Applicant

In addition to the above requirements, all international applicants must complete the Application of International Students, obtainable from the Office of Admissions. If the applicant's native language is not English, he/she is required to submit one of the following: a) a minimum TOEFL score of 550 paper-based (213 computer-based), or b) a baccalaureate degree from an accredited U.S. university. An applicant applying to any program in the Department of English must also take the Test of Written English (TWE). Applicants admitted to the program who score less than 5.0 will be required to enroll in English as a Second Language courses during their first quarter.

International applicants are also required to submit evidence that sufficient funding is available in U.S. currency through either personal resources and/or a sponsor for one academic year's experience at CWU.

Applying to CWU

CWU welcomes applications from all those who meet our minimum requirements for admission. To apply, obtain a set of our application materials from the

Office of Admissions
Central Washington University
400 East 8th Avenue
Ellensburg, Washington 98926-7463
Telephone: (509) 963-3001, Fax: (509) 963-3022

e-mail: cwuadmis@cwu.edu

A completed application file consists of the following materials received by the Office of Admissions:

- 1) A completed Admission Application.
- 2) A written Statement of Objectives.
- 3) Three (3) Letters of Recommendation written by professors or others capable of assessing your potential for success in a graduate program.
- 4) Official Transcripts from all universities and colleges attended.
- 5) Graduate Record Examination (GRE) or Graduate Management Admissions Test (GMAT) scores if required. Scores should be no more than five years old at the time of application.
- 6) A non-refundable application fee of \$35 payable at the time of filing application. Application fees may be paid by check, credit card (MasterCard and Visa only) or cash (please do not send cash through the mail). If you wish to pay by check, make it out to Central Washington University and send it, along with the other application materials, to the Admissions Office. If you prefer to pay by credit card, you may send us the card number and expiration date or telephone the Cashier's Office with this information (509-963-2224). Cash transactions should be made in person at the Cashier's Office, Barge Hall 104.

Application Deadlines

The deadlines for submitting all application materials are as follows:
April 1 for Summer and Fall Quarter
October 1 for Winter Quarter
January 1 for Spring Quarter

Deferred Admission

If a department and the Graduate School wish to admit an applicant to a program that has no space available for a particular quarter, a deferred admission may be offered. The quarter for which admission is deferred will be negotiated between the applicant and the department. If both agree,

the applicant will be asked to accept or decline in writing the deferred admission which will be valid for up to one year from the term in which the person was to have matriculated. If the applicant agrees to defer admission, no new application or application fee will be required. He/she will be expected to pay the non-refundable matriculation fee of \$55 and to obtain the concurrence of the home department and the Associate Vice President of Graduate Studies and Research concerning the quarter in which he/she wishes to enroll.

An applicant who has been admitted to graduate study, but who wishes to defer matriculation to a subsequent quarter, may do so with the written authorization of the home department and the Graduate School's concurrence. Such a deferment will be valid for up to one year from the term in which the student was to have matriculated. If the department is unable or unwilling to provide this authorization, the applicant will be obliged to reapply for admission, paying the admission application fee and providing additional documents as needed.

Application for Certification and Non-Degree Study

The university offers those seeking professional credentials, but who do not wish to pursue a master's degree, the opportunity to become post-baccalaureate students. Applications for admission to this status may be obtained from the Office of Admissions. The form should be returned to the Office of Admissions to meet the appropriate deadlines cited.

Applicants for the Continuing Certificate must contact the Certification Office to organize an approved program.

Applicants for School Counseling or School Psychology programs leading to certification must also submit references and GRE scores. Admission procedures to these two certification programs are the same as for Master's program admission.

Assistantships and Financial Aid

Central Washington University offers a number of assistantships during the academic year to beginning and continuing graduate students. Graduate assistantships are available in each of CWU's graduate program departments. Nearly two-thirds of the University's graduate assistants teach; the remainder serve as research assistants with a few performing university service functions. Applicants must 1) be fully admitted to a master's degree program at the commencement of the contract period, 2) be recommended to the position by the department where the appointee would be assigned, and 3) demonstrate a high level of professional and academic promise.

Full time assistantships require 20 hours of service per week and enrollment in at least 10, but not more than 14, credit hours per quarter, and a minimum grade point average of 3.0 each quarter. All graduate assistantship appointments are made through a formal written contract letter from the Associate Vice President of Graduate Studies and Research. Award announcements are not made until sometime after April 15.

Interested persons should contact the Office of Graduate Studies and Research for assistantship applications and information.

Financial aid is also available through the University from federal and state funds for students demonstrating financial need. Applications for financial aid may be obtained from the Office of Financial Aid and should be submitted no later than March 1. Employment opportunities, both on and off campus, are typically available as well.

MASTER'S DEGREE REGULATIONS

General Regulations

The following are the general regulations governing master's degrees. Additional requirements established by specific departments and programs may be found in this catalog under the special headings of these units. Before a decision to enter into a particular graduate degree program is made, the student is urged to communicate directly with the department in order to determine the most current program requirements. The student is responsible for seeking academic advising in the department or program of the specialization chosen. The department can assist in many of the details necessary to completing program requirements, especially early in the student's program.

Please note that each graduate department is headed by a chair who is responsible for working with graduate students in developing individual Courses of Study, establishing graduate committees, and in advising graduate students. Some graduate departments also have a graduate coordinator. In such cases, graduate students are expected to work with this person as the program's chief officer for graduate affairs. In all matters relating to university regulations, the Associate Vice President of Graduate Studies and Research is the final arbiter, though he/she consults with departmental officers in carrying out these duties.

Graduate Level Credit. Graduate level credit is given for all courses at CWU numbered at the 500 level and above. However, courses which are specifically numbered "500" are reserved for professional development courses and cannot be counted toward a master's degree.

Graduate courses numbered 501 and above are typically restricted to students who have earned a bachelor's degree and who have formally been admitted to a graduate program of the University. Some courses may also require competitive admission to a specific departmental graduate program.

Undergraduate Level Credit. Courses at the 100, 200, and 300 level are not applicable to a master's degree at CWU. Courses at the 400 level may be accepted for credit toward a graduate degree at CWU provided that they are taken after the student has been admitted to the master's degree program and are approved as part of the student's official Course of Study. In such cases, graduate students are expected to perform at a high level, while completing requirements additional to those expected of undergraduates enrolled in the course.

Transferring Credit To CWU Graduate Degree Programs. Courses taken prior to formal admission to a CWU master's degree program may be considered for transfer to a CWU Master's degree program provided that the criteria below are met.

A total of fifteen (15) graduate quarter credits may be applied to a CWU master's degree, of which no more than nine (9) quarter credits (six (6) semester credits) may be from accredited institutions offering graduate degrees other than CWU.

Credits accepted in transfer are those that are part of an accredited institution's regular graduate degree programs. In cases where courses sought for transfer generate both undergraduate and graduate credit, students receiving transfer credit are expected to have elected the course(s) at the graduate level and thus have completed more qualitatively and quantitatively than those who have taken the course(s) for undergraduate credit. Credit sought for transfer must be graded "B" or better and must have been completed no more than six years before the date of the student's master's degree program completion.

All credits intended for transfer must be recommended for approval by the departmental/program chair or graduate coordinator as a part of the official Course of Study filed with the Office of Graduate Studies and Research. Before credit can be considered part of a graduate student's program, an official transcript from the registrar of the institution from which the credit is to be transferred must be received by the Graduate School.

Credits used to fulfill requirements for another degree, either at CWU or elsewhere will not be transferred. Credit for short courses, attendance at conferences, brokered courses, workshops, and pass-fail courses are normally not accepted in transfer. Credit from any non-accredited institution or accredited institution not approved for graduate study will not be accepted for transfer. Credit obtained within the state of Washington from an accredited institution whose main campus is outside of the state will be considered for transfer only by special petition to the Associate Vice President of Graduate Studies and Research. The University reserves the right to determine the acceptability of transfer credit from any institution.

Credit-No Credit. Graduate students may take advantage of the credit-no credit option as a way to explore academic areas in which they are interested. Credit-no credit courses will not be counted toward master's degrees nor will they be computed in the graduate grade point average. Students are allowed to select one class per quarter for a credit-no credit grade. A student electing this option must designate a class as credit-no credit during registration or during change of schedule period. The credit-no credit option is distinct from courses graded on a satisfactory/unsatisfactory (S/U) basis (see S/U grading).

Credits from Extension, Workshops, and Correspondence Activity. Not more than a combined maximum of eight (8) credits of workshop courses (591s) may be applied toward a master's degree. Courses numbered 491 are not applicable to master's degree credit.

Credits earned in correspondence courses are not applicable to any master's degree.

Academic Policies

Scholastic Standards. Any graduate student in a master's program whose cumulative grade point average falls below 3.0 at the end of any quarter will be placed on academic probation for the next academic quarter. While on probation, a student may not hold a graduate assistantship. If, after one quarter of probation, the student fails to raise her/his cumulative grade point average to 3.0 or above, the student will be dropped from the University. Students may not receive a master's degree from Central Washington University if their cumulative grade point average is below 3.0.

The cumulative grade point average is calculated using all courses taken after admission into a graduate program, whether part of the approved Course of Study or not. Grades for all courses included on the Course of Study must average at least 3.0 (B).

Credit will not be accepted for courses on the Course of Study in which a grade lower than "C" is earned.

Student Study Load. The normal course load for graduate students not holding a graduate assistantship is 16 credits per quarter, 10-14 for those with assistantships. Graduate assistants taking over 14 credits must have approval from the Office of Graduate Studies and Research. For a graduate student not holding an assistantship, a study load above 15 credits and up to 20 credits may be approved by the chair or graduate coordinator of the department of the student's specialization. Loads above 20 credits are not normally permitted. Exceptions may be made only by the Associate Vice President of Graduate Studies and Research.

Maximum Time Limit to Degree Completion. No credit earned more than six years before the date of the master's degree award may be counted as part of the degree credit requirement except as may be approved by formal action by the Associate Vice President of Graduate Studies and Research. This includes applicable work transferred from other institutions.

Master's degree students are expected to complete all requirements for the master's degree within six years from the date of first enrollment. Students seeking to interrupt their studies may do so with the approval of the chair or graduate coordinator of the home department, but must pay a non-refundable fee for registration as an On-leave Student. This fee covers four successive academic quarters beginning with fall quarter. While on-leave, graduate students retain library privileges. If a degree program is not completed during the six year period from the quarter for which a student was admitted, the student must reapply to the University. If readmitted, only those credits graded B or better and completed no more than six years from the date of the student's program completion may be counted toward the degree.

Continuous Registration. All master's degree students, including students in attendance only during Summer Quarter, must satisfy the continuous registration requirement each fall quarter to maintain active status. A master's degree student may register as a full-time, part-time or as an on-leave student to satisfy the requirement. Failure to maintain Continuous Registration will be taken by the University to signify the student's resignation from the program. Students who resign and later wish to resume study toward a degree must reapply for admission and complete all steps outlined for master's admission. Readmission cannot be guaranteed.

Graduate Committee. Every master's degree candidate must have a graduate committee of at least three members. Interdisciplinary membership is strongly recommended. In some departments, a student may choose her/his committee in consultation with an advisor; in others, the chair or graduate coordinator assigns graduate committees. In either case, the graduate student is expected to work with the department chair or graduate coordinator in forming her/his committee. The student must submit a Graduate Committee and Option Approval Form to the Graduate School. If approved, the committee becomes the student's official advisory committee. The thesis or non-thesis project advisor is the student's graduate committee chair and generally is a faculty member in the department of specialization.

Only a Regular Member of the Graduate Faculty may serve as chair of a graduate committee. Adjunct faculty may serve as committee members with the approval of the Associate Vice President of Graduate Studies and Research.

Under unusual circumstances, and with the written recommendation of a graduate student's home department or program and the approval of the Associate Vice President of Graduate Studies and Research, an Associate Member of the Graduate Faculty may serve as co-chair of a student's graduate committee. The Associate Member will serve as co-chair along with a Regular Member of the Graduate Faculty. The minimum number of members needed for a graduate committee will remain at three.

The Graduate Faculty. At CWU graduate professors are teachers and mentors, as well as active researchers and artists. They blend instructional and research activities and in so doing afford our graduate students the benefit of state-of-the-art research and creative experience with personalized instruction.

Course of Study. All candidates must complete at least 45 credits (some programs require more credits) as outlined in an official Course of Study, endorsed by the department chair or graduate coordinator and the committee chair and filed with and approved by the Office of Graduate Studies and Research. The credit on the Course of Study must be separate and distinct from credit applied toward any other degree. Course of Study forms are available in the Graduate School office, Barge Hall 305.

The Course of Study should be filed before a graduate student has completed 25 quarter credits leading to the master's degree. No more than fifteen (15) quarter credits completed at CWU before the quarter of formal admission will be accepted on the

official Course of Study for the master's degree, although the department and the Graduate School reserve the right to limit the use of such credit, or not count it at all. Graduate students are urged to discuss the counting of such credit as soon after being admitted as possible. An approved Course of Study must be on file with the Graduate School before the Graduate Committee and Option Approval form will be considered for approval.

The official Course of Study reflects the credit required to meet requirements for the master's degree. Unless revisions are approved by the department chair or graduate coordinator and the Associate Vice President of Graduate Studies and Research, the student must complete satisfactorily or be currently enrolled for all credit specified before advancement to candidacy or before the degree award will be processed. Each graduate student, as part of degree requirements must complete a thesis, project and/or comprehensive examination (see below for information about culminating projects).

The student's graduate advisor or committee chair, in consultation with the department chair and/or graduate coordinator, works with the student in designing a program of study. Once agreed upon, the student prepares an official Course of Study form obtained from the Graduate School, which is then endorsed by the department chair or graduate coordinator, along with the student's committee chair. Upon receipt in the Graduate Office, each Course of Study is reviewed to ensure that it meets the minimum requirements of the institution.

Individual Studies Programs. Individual Studies degree programs are intended to allow highly motivated students to pursue an interdisciplinary course of study combining coursework from more than one discipline, where no such formal master's degree program is in place. Individual Studies program proposals must show academic rigor, be programmatically coherent and intellectually sound. Final approval of such programs resides with the Associate Vice President of Graduate Studies and Research.

Prospective applicants seeking to pursue an Individual Studies degree must contact the Associate Vice President for Graduate Studies and Research to discuss the feasibilities of the desired program.

Credits Required. A graduate student must complete at least 45 quarter credits (some programs require more credits) in the 400, 500 and above credit level groups. At least 25 credits of the total required for the degree must be numbered 501 or above.

Some departments restrict the number of credits below the 500 level. Please consult the departmental listings in this catalog for specific additional credit level requirements.

At least 30 credits appearing on the Course of Study for the Master's degree must be on a graded scale (not S/U). Credit/no credit courses will not be counted toward a master's degree at CWU.

Culminating Experience. All students pursuing the master's degree must demonstrate their ability to communicate effectively in writing by satisfactorily completing one or more of the following: (a) a thesis, (b) a written report of a field study, internship, or creative project, and/or (c) a comprehensive written examination. In programs allowing the option, the student's graduate committee in the area of specialization will decide with the student whether to carry out (a), (b), and/or (c) above. A prospectus of the thesis, field study, internship or creative project must be approved by the student's committee before work begins. The report on the thesis, field study, internship or creative project must conform to standards described in Thesis Regulations which are available in the Office of Graduate Studies and Research.

Thesis. A thesis is a written study prepared by the student that demonstrates her/his ability to conduct original, independent research. The thesis topic must be approved in its preliminary stages by the student's graduate committee, the chair of the department of specialization or graduate coordinator, and the Associated Vice President of Graduate Studies and Research. A form for certifying thesis completion is available in the Office of Graduate Study and Research.

The thesis must be prepared according to standards of format, style, typeface and paper quality, as outlined in Thesis Regulations available at the Office of Graduate Studies and Research. The graduate student is expected to work closely with the thesis advisor and thesis committee in the conception, design and execution of the thesis. Working with the thesis committee chair, a graduate student will submit copies of the thesis to the committee at least two full weeks in advance of the final examination. Draft copy must be provided with sufficient lead time to allow faculty to review and critique it. It is very important that the student maintain close contact with committee members during thesis preparation. At the appointed time, the student will defend her/his work before the committee. The thesis defense grade will be assigned as either satisfactory or unsatisfactory. Jointly written theses are not permitted.

Approval of a thesis is a two stage process. First, if successfully defended, it must receive the written approval of all committee members. Second, it must be reviewed and approved by the Graduate School. If approved by the thesis committee, a thesis approval page and the thesis grade report should be signed by all members of the committee after required corrections, if any, are made. Once the graduate student has prepared the thesis in the format required by the Graduate School, and has double checked to insure that all style and format rules have been observed, he/she should submit the thesis for review to the Graduate School.

The thesis must include an abstract (150 words or less) described in "Thesis Regulations" available in the Office of Graduate Studies and Research. The original and two copies of the completed approved thesis, with pages in proper order, must be submitted to the Graduate Office and accepted for binding before the student will be cleared for graduation. An additional copy of the abstract, printed on thesis quality paper, must also be submitted to the Graduate School.

The Graduate School and the student share in the cost of binding the thesis. Each student pays a binding fee that helps defray the cost of binding the original and two copies of the thesis. Thesis binding fees are \$60 for three copies. Two copies are deposited in the library and one copy is given to the student. Students not wishing to retain a copy for themselves should submit the original copy plus one other in accordance with the above instructions. He/she will be assessed \$40 in binding fees.

Graduate students whose research involves human subjects or vertebrate animals may not commence research without first obtaining clearance to do so from the Institutional Review Board (See Institutional Review Board or Animal Care and Use Committee below.)

Institutional Review Board Approval. Central Washington University is concerned that no research conducted at this institution by its faculty or its students expose people who participate as subjects to unreasonable risk to their health, general well-being, or privacy. Therefore student research projects which involve human subjects must be reviewed by the university's Human Subjects Review Committee (HSRC), our Institutional Review Board for the Protection of Human Subjects. Students apply for HSRC review by filling out an application form which can be obtained from the HSRC office or on line at <http://www.cwu.edu/~hsrc>. Early contact with the Human Protections Administrator is recommended. No research can be initiated prior to formal approval.

Animal Care and Use Committee. Graduate students whose research involves vertebrate animal subjects, may not commence research without first obtaining clearance from the Animal Care and Use Committee. Forms for applying for review may be obtained in the Office of Graduate Studies and Research or on line at <http://www.cwu.edu/~masters>.

Project. Several departments allow a student to complete a project, rather than a thesis. This is done in instances where the faculty and student determine that a special project, rather than a master's thesis, will strengthen the student's learning experience. Typically, projects are completed in professional programs.

Completing Degree Requirements

Final Folder Evaluation. All graduate students must contact the Office of Graduate Studies and Research for a final review of their file no later than the first week of their anticipated final quarter as soon as they have registered. At this evaluation, candidacy requirements, grade point average, Course of Study completion, and examination scheduling will be processed. Advancement to candidacy and final examination scheduling will not be permitted except during the final quarter.

Final Examination. After the student has registered and been cleared to proceed toward completion through a folder check by the Graduate School, he/she must pass oral and/or written examinations covering courses, seminars and thesis, or such other examination as necessary to complete degree requirements. A permission form authorizing the final examination will be issued by the Graduate office after a final evaluation of the student's Program of Study has been completed and once the student has met the final quarter enrollment requirements.

At least two weeks prior to the final examination, four (4) copies of a "Brief" must be submitted to the Office of Graduate Studies and Research. A sample brief is included in the Thesis/Non-Thesis Guidelines available at the Graduate Office or on line at the Graduate Studies page (<http://www.cwu.edu/~masters>). Copies will be distributed to the student's graduate faculty committee prior to the examination. One copy will remain in the student's file.

For the final examination, an outside representative of the Graduate Faculty will routinely be assigned by the Dean of Graduate Studies and Research.

Final Folder Evaluation. All students must visit the Office of Graduate Studies and Research for a final review of their file no later than the first week of their anticipated final quarter. At this evaluation, candidacy requirements, grade point average, Course of Study completion, and examination scheduling will be processed. Advancement to candidacy and final examination scheduling will not be permitted except during the final quarter.

Final Quarter Enrollment Requirement. A student admitted to a master's degree program must be registered for a minimum of two (2) credits at the University during the quarter the master's degree is conferred. Enrollment for this purpose should be completed during the usual early registration or regular registration periods to insure degree conferral if requirements are met.

The permit for scheduling the final examination, approved by the committee, must be filed in the Office of Graduate Studies and Research at least three weeks in advance of the examination. The final examination must be scheduled between the hours of 7 a.m. and 6 p.m., Monday-Friday, when the University is in session (not between quarters). Final examinations are conducted by the candidate's committee and are open to the faculty. The committee alone shall decide upon the merit of the candidate's performance. Final assessment of the examination will be reported on a satisfactory/unsatisfactory basis. The candidate shall pass the examination if two-thirds of the official graduate faculty committee members so indicate. In the event of an unsatisfactory final examination, a second examination may be scheduled upon the endorsement of the major department chair and with the approval of the Dean of Graduate Studies and Research the subsequent quarter with at least two months intervening.

All degree requirements must be completed within the same or next quarter from the exam date. Failure to complete remaining requirements by the end of the next quarter will result in requiring the exam to be retaken.

A student whose name has been placed on the degree list for a particular quarter and who, nevertheless, does not complete the requirements for degree conferral by the published deadline (two weeks before the last day of finals), but who does complete all the requirements by the last day of that quarter, will receive the degree the following quarter without further registration.

Advancement to Candidacy

A student becomes eligible for advancement to candidacy for a master's

degree upon fulfillment of the following requirements:

1. Completion of the course requirements as set forth in the Course of Study.
2. Completion of the thesis or thesis option where appropriate.
3. Attainment of a cumulative grade point average of 3.0 (B) or better for all courses taken since admission to the graduate program and all work included in the Course of Study.
4. Completion of additional departmental requirements, e.g., proficiency in a foreign language.
5. Fulfillment of the statute of time limitation (six years) requirement.
6. Passing of an oral and/or written examination covering courses, seminars, and thesis, or other examinations deemed necessary by the major department.

Graduation

Application for a master's degree must be submitted to the Office of Graduate Studies and Research by the stated quarterly deadline. The application will not be completed without payment of binding and degree fees. The fee for the master's degree is \$10 plus a \$1 student benefit fee. The application is for a specific quarter of degree conferral. If requirements are not met, the student must reapply and pay the fees for degree conferral in a subsequent quarter.

Candidates for the master's degree are encouraged to participate in the commencement exercises following the completion of degree requirements. See the academic calendar in the front of this catalog for deadline dates to arrange for regalia.

Second Master's Degrees

Students seeking a second master's degree must be admitted to the second program in accordance with admission regulations and must complete an approved Course of Study (of at least 45 credits) distinct from the courses offered for the first master's degree.

Graduate Certificate Programs

In addition to the degree programs outlined above, the following graduate certificate programs are offered at the University. Application forms and further information can be obtained from the Office of the Associate Dean of Education and Professional Studies located in Black Hall 228. The Certification Office is open daily, Monday through Friday, from 8 a.m. to noon and 1 to 5 p.m. General inquiries and information regarding the fifth year program and teacher certification should be addressed to the Director of Certification. The telephone number is (509) 963-2661.

Renewal of Initial or Residency Certificate
Fifth Year of Study for Continuing or

Professional Certificate
Endorsement-Only Program
Initial Principal's Certificate
Continuing Principal's Certificate
Initial Program Administrator
Continuing Program Administrator
Educational Staff Associate Certificate:
School Counselor
School Psychologist

Renewal of the Initial Teaching Certificate.

The Initial Teaching Certificate is valid for four years from the date of issuance and may be renewed once for a three-year period when the following requirements are met:

1. The individual completes an initial certificate renewal application which may be secured from the office of the Associate Dean of Education and Professional Studies.
2. The individual has completed all coursework requirements for the continuing certificate or has completed at least 15 quarter hours of course work since last certificate was issued.

Renewal of Residency Certificate. The Residency Teaching Certificate is valid for five years and may be renewed for two years with verification the applicant is enrolled in and making satisfactory progress in a Professional Teaching Certificate program. If an applicant has not been employed as a contracted teacher in Washington, the certificate may be renewed once for five years by completing 15 quarter hours (10 semester hours) of study since the issuance of the Residency Teaching certificate.

Continuing Certificate. Candidates for the continuing certificate must meet the following requirements:

1. Have a valid Initial Teaching Certificate
2. Verify at least one year of full time teaching experience.
3. Complete 45 credits of upper-division (300 level or higher) course work including courses in abuse, staff development and supervision, research and evaluation, and referral agencies.

To maintain the continuing certificate, each person must complete 150 clock hours of approved inservice education and/or 15 college or University credits every five years.

Professional Certificate. In addition to meeting requirements for the Residency Teaching Certificate, candidates for the Professional Certificate must meet the following:

1. Completion of "provisional status" employment in a public or an approved private school (two years contracted teaching in the same district).
2. Completion of an approved performance-

based college/university Professional Certificate program. Please contact the Office of the Associate Dean, College of Education and Professional Studies for application and information.

3. Completion of course work in issues of abuse.

To maintain the Professional Teaching Certificate, an individual must complete 150 clock hours of inservice training every 5 years. Some of the clock hours must relate to one of the six state salary criteria and some must relate to one of the three standards for the Professional Teaching Certificate.

Endorsement-Only Program. CWU's Endorsement-Only Program is available to certified teachers who hold the Washington State Initial, Residency, or Continuing Teaching Certificate and who wish to add a teaching endorsement to their certificate. Teachers interested in obtaining and endorsement from CWU should submit an application (available online at cwu.edu/~cert) and official transcripts. A credit evaluation of the applicant's records will be completed by the Associate Dean's staff, routed to the endorsing department for approval, and then forwarded to the applicant.

School Administration Certificates. Central Washington University has been authorized by the State Board of Education to recommend issuance of initial and continuing principal's certificates valid for service as vice principal, assistant principal or principal of elementary, middle, junior high, and/or high schools. The University is also authorized to recommend issuance of

the program administrator certificate as director of supervision and curriculum or special education. These programs of preparation include formal study and internship experiences. (See Master of Education, Administration, Special Education, or Supervision and Curriculum.)

Requirements for the Initial Certificate include:

1. Possession of a valid teacher or educational staff associate (whichever is appropriate) certificate.
2. Completion of the Master's degree.
3. If the Master's degree is already earned from an accredited institution, please check with the school administration program director regarding program requirements.
4. Successful teaching experience of three years in a state approved K-12 setting is required.
5. One academic year as an administrative intern at the level for which certification is being sought.

Requirements for the Continuing Certificate include:

1. Three years of full-time experience as a practicing administrator (for Continuing Principal Certificate, experience must be as principal, vice principal or assistant principal).
2. Must have completed all requirements for Initial Certificate.

Persons seeking further information are invited to correspond with the School Administration Program Director, Department of Teacher Education Programs.

Special Certificates. Preparation for special certificates, authorized by the State Board of Education, is available at Central Washington University. Programs leading to the educational staff associate certificate are available in the following areas: 1) school counselor, and 2) school psychologist.

Programs leading to certification in specific vocational areas are available in: 1) business education; 2) marketing education; 3) diversified occupations; 4) family and consumer sciences; and 5) trade and industrial (including health occupations and technical education.) For information regarding these programs, please contact the specific departments.

Applications for the school counselor or school psychologist ESA certificate can be obtained from the Psychology Department and are processed through the Office of the Associate Dean, College of Education and Professional Studies.

Those interested in other special certificates should contact the Washington State Director of Certification, Office of the Superintendent of Public Instruction, Old Capital Building, P.O. Box 47200, Olympia, WA 98504-7200.

Master's Degree and Certification. Please note that a graduate student enrolled in a master's degree program does not necessarily satisfy all certification requirements by completing the master's degree. Students pursuing master's degrees in combination with certificate programs should maintain contact with the department of their specialization and with the office of the Director of Certification to ensure that all requirements are met.



ACCOUNTING

Graduate Faculty
Chair: J. D. Forsyth
 Shaw-Smyser 338

Associate Professor:
 MaryAnne Atkinson
 Ronald R. Tidd

Assistant Professors:
 Joseph Bradley
 Mike Ruble

Master of Professional Accountancy

Admission Requirements

In addition to general regulations for admission to Master's programs, admission to the Master of Professional Accountancy program requires the following:

1. Meet one of the following four degree requirements:
 - a. Bachelor's degree in Accounting from an accredited university; or
 - b. Bachelor's degree in Business Administration from an accredited university may be provisionally accepted. Full acceptance for provisionally accepted students shall result upon completion of the core accounting courses listed below with a 2.7 grade point average.
 ACCT 305, Cost Accounting
 ACCT 346, Income Tax Accounting I
 ACCT 350, Intermediate Accounting I
 ACCT 351, Intermediate Accounting II
 ACCT 460 shall be completed during the Master's program as an elective.
 - c. Bachelor's degree in Managerial/Business Economics from an accredited university may be provisionally accepted. Full acceptance for provisionally accepted students shall result upon completion of the core business and accounting courses listed below with a 2.7 grade point average.
 BUS 241, Legal Environment of Business
 ACCT 305, Cost Accounting
 ACCT 346, Income Tax Accounting I
 ACCT 350, Intermediate Accounting I
 ACCT 351, Intermediate Accounting II
 ACCT 460 and MGT 489 shall be completed during the Master's program as the electives.
 - d. Bachelor's degree from an accredited university in an area other than Accounting, Business Administration, or Managerial/Business Economics may be provisionally accepted. Full

acceptance for provisionally accepted students will result upon completion of the following core business courses with a 3.0 grade point average and the core accounting courses with a 2.7 grade point average.

ACCT 251, Accounting I
 ACCT 252, Accounting II
 BUS 221, Introductory Business Statistics
 BUS 241, Legal Environment of Business
 ECON 201, Principles of Economics Micro
 ECON 202, Principles of Economics Macro
 FIN 370, Introduction of Financial Management
 MKT 360, Principles of Marketing
 ACCT 305, Cost Accounting
 ACCT 346, Income Tax Accounting I
 ACCT 350, Intermediate Accounting I
 ACCT 351, Intermediate Accounting II

The following classes also shall be required to be completed during the Master's program as the two electives:
 ACCT 460, Auditing
 MGT 489, Business Policy

2. If your native language is not English, you are required to submit a Test of English as a Foreign Language (TOEFL) computer-based score of 213 or above or paper-based score of 550 or above. You also are required to submit a Test of Spoken English (TSE) score of 50 or above [Communication generally effective-74th percentile.
3. Instead of providing Graduate Record Examination (GRE) scores, Graduate Management Admission Test (GMAT) scores are required. Admission to the program will be competitive based mainly on grade-point-average and scores on the Graduate Management Admission Test (GMAT) using the following formula:

$$\begin{aligned} &(\text{Grade Point Average on a 4.0 scale} \times 200) \\ &= 800 \text{ points possible} \\ &+(\text{Graduate Management Admission Test}) \\ &= 800 \text{ points possible} \\ &\text{Total Score} = 1,600 \text{ points possible} \end{aligned}$$

The factor will be used for the initial ranking of candidates for admission consideration. In addition to the factor rankings, the department may use other considerations to develop the final admissions list. Due to space considerations, a separate admissions list will be developed for each location. Students will be accepted into the program at a specific location and will be allowed to take classes only at that location. Students may not transfer to other locations without the permission of the department chair.

Required Courses	Credits
Management Core	
MGT 505, Customer Value/Leadership ...	5
MGT 525, Strategic Management/ Business Simulation	5

Accounting Core	
ACCT 510, Information Systems Security, Control, and Audit	5
ACCT 520, Tax and Legal Strategies for Business	5
ACCT 530, Financial Statement Analysis ..	5
ACCT 585, Seminar in Professional Accountancy	5
ACCT 700, Master's Thesis, Project Study, and/or Examination	1
Elective Courses	15
ACCT 535, Database Management Systems (5)	
ACCT 540, Electronic Commerce (5)	
ACCT 550, Enterprise Business Modeling (5)	
ACCT 560, Object Oriented Analysis and Design (5)	
ACCT 570, Foundations of Income Taxation (5)	
ACCT 580, Tax Planning for Entities (5)	
ACCT 590, Cooperative Education (5)	
ACCT 596, Individual Study (5)	
Approved Electives-400 Level or Above (5)	

Program Total Credits 46

Graduate Courses in Accounting

- ACCT 510. Information Systems Security, Control and Audit (5).** Case studies in information systems and professional ethics. Improvement of auditing knowledge and skills. Group case presentations. Paper submission to journal and presentation to professionals.
- ACCT 520. Tax and Legal Strategies for Business (5).** Case studies in business law and taxation. Improvement of business law and taxation knowledge and skills. Group case presentations. Tax paper presentation to professionals.
- ACCT 530. Financial Statement Analysis (5).** Prerequisite, admission to the Master of Professional Accountancy program. Case studies in financial accounting. Improvement of financial accounting knowledge and skills. Group case presentations. Original business plan development and presentation to professionals.
- ACCT 535. Database Management Systems (5).** Prerequisite, admission to the Master of Professional Accountancy program. Introduction to the design, implementation and use of relational data base management systems. Design and implementation of an accounting system using database technology.

ACCT 540. Electronic Commerce (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Department Chair. Introduction to the technical, cultural, ethical, managerial, and economic issues of electronic commerce development. Design and develop Web site to collect and distribute information.

ACCT 550. Enterprise Business Modeling (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Department Chair. Identifying information requirements and configuration methods for ERP software. Examination of new technologies. Group presentation to professionals.

ACCT 560. Object Oriented Analysis and Design (5). Prerequisites, admission to the Master of Professional Accountancy program or permission of the Department Chair. Development and modification of event-driven systems. Examination of new technologies. Group presentation to professionals.

ACCT 570. Foundations of Income Taxation (5). Prerequisite, admission to the Master of Professional Accountancy program or permission of the Department Chair. Introduction to foundations of income taxation of corporations, partnerships, and individuals, with emphasis on tax compliance and computer-based tax research.

ACCT 580. Tax Planning for Entities (5). Tax planning for corporations and partnerships. Group presentation to professionals.

ACCT 585. Seminar in Professional Accountancy (5). Prerequisite, admission to the Master of Professional Accountancy program. MPA capstone course. Uses case analysis and other techniques to develop professional analysis and decision-making skills and policy determination abilities.

ACCT 590. Cooperative Education (5). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U.

ACCT 596. Individual Study (1-6). Prerequisite, permission of instructor.

ACCT 598. Special Topics (1-6).

ACCT 700. Master's Thesis, Project Study, and/or Examination (1). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U.

ANTHROPOLOGY AND MUSEUM STUDIES

**Graduate Faculty
Chair: Kathleen Barlow
Farrell Hall 309**

Professor:

Anne S. Denman, Cultural Anthropology, Gender Roles, American Culture
Steven Hackenberger, Cultural Ecology, Archaeology, Cultural Resource Management, Computer Simulation, North America and Caribbean

Associate Professors:

Tracy J. Andrews, Sociocultural Anthropology, Ethnicity, Medical Anthropology, Ecological Anthropology, Gender, Native North America
Loran E. Cutsinger, Cultural Anthropology, Informal Economy, Gender, Caribbean, Russia, Middle East
Patrick McCutcheon, Archaeology, World Prehistory, Evolutionary Theory, Environmental Archaeology, Archaeometry, North America

Assistant Professors

Patrick Lubinski, Archaeology, Zooarchaeology, Cultural Resource Management, North America
Lene Pedersen, Sociocultural Anthropology, Visual and Environmental Anthropology, Postcolonialism, SE Asia (Indonesia), E. Africa, Circumpolar North
Lori A. Sheeran, Biological Anthropology, primate ecology, Black Gibbons, China
Penglin Wang, Linguistic and Cultural Anthropology, East and Central/Inner Asia, China

General Departmental Information

Anthropology jointly coordinates the Master of Science degree program in Resource Management with the Department of Geography and Land Studies. For further information, see Resource Management.

Graduate Courses in Anthropology

ANTH 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

ANTH 521. Cultural Resources Management (3). Philosophy, history and legislation relating to archaeology and historic preservation; design and implementation of cultural resources management programs.

ANTH 522. Historic Preservation (4). Prerequisite, permission of instructor. Theory and methods in the identification, evaluation, and protection of historic resources.

ANTH 596. Individual Study (1-6). Prerequisite, permission of Department Chair.

ART

**Graduate Faculty
Chair: Michael Chinn
Randall 100**

Professor

Michael S. Chinn, Wood Design

Associate Professors

Glen Bach, Computer Art
William Folkestad, Art History and Criticism
Keith Lewis, Jewelry and Metalsmithing

Assistant Professors

Stephen Chalmers, Photography
Ovidio Giberga, Ceramics
Brian Goeltzenluechter, Painting, Drawing
Patte Loper, Painting, Drawing
Donna Stack, Sculpture
Shari Stoddard, Art Education

General Departmental Information

The Department of Art offers two graduate degree programs for students wishing to study visual art beyond the baccalaureate level. Each degree requires that candidates complete coursework in art concepts and criticism, art history, studio area of concentration, electives, and a creative thesis project.

The 45 credit Master of Arts (M.A.) program offers students advanced study in the various studio areas and in art history. The M.A. is intended for students who desire graduate-level training in art and helps prepare them for various arts-related careers and for further advanced studies in art.

The 90 credit Master of Fine Arts (M.F.A.) is a terminal degree program providing students with professional levels of competency and experience in studio art. The M.F.A. program qualifies students for careers as teachers in higher education, as professional studio artists, and for other studio-arts related vocations. The following studio art concentrations are offered at Central Washington University:

Ceramics
 Computer Art
 Drawing
 Jewelry and Metalsmithing
 Painting
 Photography
 Sculpture
 Wood Design

Policies and Procedures

Departmental policies and procedures regarding graduate study are fully described in the departmental "Graduate Handbook".

Master of Arts

Program Coordinator:
 Michael Chinn
 Randall 100

Required Courses	Credits
ART 589, Art Concepts and Criticism	3
Art History	4
Major area of concentration in Art	16-24
ART 700, Studio Project (or Thesis Option) 8	
Electives	8-12

Total Credits Required 45

Master of Fine Arts

Program Coordinator:
 Michael Chinn
 Randall 100

Required Courses	Credits
ART 589, Art Concepts and Criticism	3
Art History, 400 level and above	12
Major studio concentration	40-56
Electives outside major studio concentration	12-24
ART 700, Studio Project (or Thesis option) 12	

Total Credits Required 90

Application and Admission. In addition to the university regulations governing admission to graduate degree programs, the following specific regulations apply to both the M.A. and M.F.A. Programs:

- A. Acceptance is primarily based on the student's potential as evidenced by a portfolio, previous coursework in art, goals consistent with departmental resources and other experiences relevant to artmaking. Applicants may be asked to have a telephone interview with a faculty member in their area of studio concentration before being admitted to a program.
- B. Applicants are required to submit examples of their work in the form of 35mm slides or other appropriate media. This documentation should represent the depth and breadth of the applicant's work. Students are strongly urged to visit

the campus and arrange a personal interview with faculty members in their major area of concentration and with the Art Department Chair prior to submitting an application. Consistent with the above criteria, applicants with undergraduate degrees in disciplines other than visual arts are encouraged to apply.

Transfer of Credits. The general provisions for the transfer of credits are set forth under the catalog heading, General Master's Degree Regulations.

Residence Requirements. Students must be in residence three consecutive full-time quarters (excluding summers). All studio credits, except those approved under the transfer of credit provisions, must be taken in residence. For these purposes, residence may include credits taken in travel study, internship programs or other study taken elsewhere but listed on the approved Course of Study.

Graduate Committee. A committee of at least three faculty members will be organized by the student during the student's first quarter of residency. The members of this committee will be chosen in consultation with the student's committee chairperson. The Chair of the committee, in consultation with the student, will schedule a meeting at least once each quarter. More frequent meetings may be scheduled. The purposes of these meetings are:

- to determine that the student is making satisfactory progress in the degree program
- to evaluate the student's studio work
- to identify problems and to offer solutions.

A first year review will consist of an evaluation of the student's work, completed or in progress, including review of non-studio coursework. MFA/MA candidacy is contingent on successful progress in the following areas: studio work, knowledge of art history and understanding of contemporary theory and criticism. Additional course work may be required at the graduate committee's discretion.

Further details regarding the graduate committee process are provided in the Graduate Handbook.

Graduate Assistantships. Teaching or staff assistantships are awarded on a competitive basis. Assistants are granted by the Associate Vice President of Graduate Studies and Research based upon the recommendation of the Department Chair.

Studio Space. Shared or individual studio workspace is provided to Graduate Students as available and will be allocated by the Chair of the Department of Art.

Studio Project. In order to successfully complete ART 700, Studio Project, the MFA/MA candidate must present a cohesive body of work completed in the last year of study as evidence of mastery in their area of concentration. This studio project is

developed in consultation with the student's graduate committee and presented as a public exhibition. The studio project also requires students to present a written document that supports their body of work.

The written document must meet thesis format standards as required by the Office of Graduate Studies and Research.

Final Oral Examination. Upon completion of the studio project, the student will discuss and defend the project and the accompanying written document in an Oral Examination conducted by the graduate committee. Upon successful completion of the Oral Examination, the graduate committee will confer and render a determination of the success of the student's project.

Graduate Courses in Art

ART 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

ART 525. Advanced Studies in Photography (2-5). Prerequisite, ART 425 or equivalent. May be repeated for credit.

ART 530. Current Problems in Art Education (4). Prerequisite, acceptance into the Master of Education/Master Teacher Program. An inquiry-oriented course examining new methods, problems, and practices in teaching art in modern public schools.

ART 531. Issues and Trends in Art Education (4). Prerequisite, acceptance into the Master of Education/Master Teacher Program. Contemporary issues and trends in art education. Attention to innovations, politics, social and school change with regard to program values and development.

ART 533. Seminar in Art Education (4). Prerequisite, acceptance into the Master of Education/Master Teacher Program. Group or individual investigation of philosophy, methods, and research in art education.

ART 534. Workshop in the Visual Arts (4). Prerequisite, acceptance into the Master of Education/Master Teacher Program. Exploration of current concepts, contemporary techniques and theory in art education.

ART 541. Advanced Studies in Wood (2-5). Prerequisite, ART 441 or equivalent. May be repeated for credit.

ART 546. Advanced Studies in Jewelry and Metalsmithing (2-5). Prerequisite, ART 446 or equivalent. Independent, advanced exploration of jewelry or metalwork. Emphasis on conceptual strength, growth and technical mastery. May be repeated for credit.

ART 550. Advanced Studies in Drawing (3). Prerequisite, ART 450 or equivalent. May be repeated for credit.

ART 553. Art in the United States (4). Sculpture, painting and architecture from Colonial period to present, with emphasis on the period 1900-1945. International influences are identified and traced to their assimilation. ART 553 and ART 453 are equivalent courses. Students may not receive credit for both.

ART 556. History of Eastern Art (4). Prerequisite, permission of the instructor. A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan. ART 556 and ART 456 are equivalent courses. Students may not receive credit for both.

ART 557. African and Oceanic Art (4). The tribal arts of Africa and Oceania as represented by the cultures of Polynesia, Micronesia, Melanesia, and Australia from prehistoric times to the present. ART 557 and ART 357 are equivalent courses. Students may not receive credit for both.

ART 560. Advanced Studies in Painting (2-5). Prerequisite, ART 460 or equivalent. May be repeated for credit.

ART 565. Advanced Studies in Ceramics (2-5). Prerequisite, ART 465 or equivalent. May be repeated for credit.

ART 579. Critique Seminar (2). A forum for the presentation and development of critical dialog about student work as well as for discussion of contemporary issues and practices in visual art.

ART 580. Advanced Studies in Sculpture (2-5). Prerequisite, ART 480 or equivalent. May be repeated for credit.

ART 589. Art Concepts and Criticism (3). Study of the attitudes and values in relation to recent changes in art forms and contents. Analysis and practice in critical judgment.

ART 595. Art Teaching Practicum (1-6). Prerequisite, permission of instructor. May be repeated for a total of 12 credits. Restricted to graduate students in the Master of Fine Arts program. Grade will be S or U.

ART 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ART 598. Special Topics (1-6).

ART 599. Seminar (1-5). May be repeated.

ART 700. Master's Thesis, Project Study and/or Examination (1-12). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for credit not to exceed 6 credits for M.A. degree and 12 credits for M.F.A. degree.

Graduate Courses on Reserve:

The following courses are on reserve and may be offered subject to program needs. ART 554. Art of China (4); ART 555. Art of Japan (4); ART 585. Advanced Studies in Printmaking (2-5).

BIOLOGICAL SCIENCES

Graduate Faculty

Chair: David M. Darda
Science Building 338

Professors

David M. Darda, Evolutionary Vertebrate Morphology, Herpetology
Paul W. James, Aquatic Ecology and Fisheries Biology
Sheldon R. Johnson, Director Allied Health Sciences; Zoophysiology, Mammalogy

Associate Professors:

Daniel D. Beck, Physiological Ecology and Herpetology
Kristina A. Ernest, Terrestrial and Community Ecology
Holly C. Pinkart, Microbiology
Mary Poulson, Plant Physiology
Linda A. Raubeson, Plant Systematics and Evolution
Lixing Sun, Behavioral Ecology and Evolution

Assistant Professors

Patrick J. Bryan, Invertebrate Zoology, Developmental Biology
Tom R. Cottrell, Plant Ecology
Philip W. Mattocks, Ornithology and Physiology
Steven D. Verhey, Cell and Molecular Biology
Steven Wagner, Conservation Genetics, Herpetology
Candace Winstead, Immunology, Virology

Master of Science

Biology

Program Coordinator:

Paul W. James
SCI 338D

Program Description

The graduate program in biology is designed to provide training and expertise for those needing a terminal degree for entry-level biological science positions in state, federal and tribal agencies, as well as for positions in private industry or teaching at the secondary or community college level. It serves other students by providing them

with the skills and techniques required for further graduate study beyond the M.S. degree. Students considering further graduate study should work closely with their major advisor to design a program of coursework that meets the requirements for Ph.D. programs. Graduate students in biology may tailor their program to emphasize a specific discipline within the biological sciences.

Admission

Admission is a two-step process. Applicants must first meet the general requirements for graduate study as determined by the Office of Graduate Studies and Research, and then the specific requirements of the Department of Biological Sciences, which are:

1. An undergraduate degree in Biology or closely related field. Deficiencies in the student's undergraduate training as determined by the Department of Biological Sciences at the time of admission to the program must be removed without graduate credit during the first year of graduate study.
2. Students must submit Graduate Record Examination scores for the general test.
3. International students for whom English is a second language must provide TOEFL scores to demonstrate English proficiency.
4. Students must arrange for a graduate faculty advisor in the Department of Biological Sciences to serve as their major advisor

Program Requirements

The coursework leading to the Master of Science in Biology will total at least 45 credits in the biological sciences and related subjects as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. Thesis and non-thesis options are available. The non-thesis option requires a study project. Students electing the non-thesis option ideally should have a valid teaching certificate before entering the program and must have a valid teaching certificate before the M.S. degree will be granted. The individual's program of coursework and thesis problem or project study will be developed in consultation with the student's major advisor and other members of the student's graduate committee. Two quarters in residence are required.

Examinations

Candidates must pass an oral examination covering topics in their area of specialization and coursework taken for their degree at least one quarter prior to graduation. The final examination will consist of a public seminar to present the results of the thesis or project research as well as an oral exam

administered by the student's thesis committee covering aspects of the thesis research.

Required Courses:	Credits
BIOL 520, Developments in Cellular Biology	3
BIOL 570, Developments in Organismal Biology	3
BIOL 580, Research Methods and Techniques	4
BIOL 581, Seminar	1-5

Graduate Courses in Biological Sciences

BIOL 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. Formerly BISC 500.

BIOL 520. Developments in Cellular Biology (3). Prerequisite, graduate standing or permission. Ways in which new information is being integrated with the basic concepts of cellular and molecular biology. Formerly BISC 513. Students may not receive credit for both.

BIOL 552. Aquatic Entomology (5). Prerequisite, BIOL 351 or permission. Biology and taxonomy of major groups of aquatic insects. Two lectures and six hours of laboratory a week. A field course. Formerly ZOOL 562. Student may not receive credit for both.

BIOL 565. Advanced Animal Behavior (5). Prerequisite, graduate student status. Advanced knowledge in the study of animal behavior. Three hours lecture, two hours laboratory, one hour independent study per week. Formerly BISC 565. BIOL 465/565 and PSY 565 are equivalent courses. Students may not receive credit for both PSY 565 and either BIOL 465 or BIOL 565 or BISC 565.

BIOL 566. Conservation Biology (5). Prerequisite BIOL 360 and graduate standing or permission of instructor. An introduction to the theory and practice of conservation biology, with emphasis on case studies. Two hours lecture, one hour discussion, and 4 hours lab or field study per week. Weekend field trips may be required. Students may not receive credit for both BIOL 466 and BIOL 566. Formerly BISC 540.

BIOL 570. Developments in Organismic Biology (3). Prerequisite, graduate standing or permission. Ways in which new information is being integrated with the basic concepts of evolutionary and systematic biology. Formerly BISC 511. Students may not receive credit for both.

BIOL 580. Research Methods and Techniques (4). An introduction to methods, techniques and procedures commonly used in biological research. Laboratory and field methods will be discussed as well as data collection and analysis techniques. Experimental design of research projects will be emphasized. Formerly BISC 515. Students may not receive credit for both.

BIOL 581. Seminar (1-5). Discussion of specific topics from readings in biological journals, books, and other materials. May be repeated for credit to a maximum of 5 credits. Formerly BISC 589.

BIOL 590. Cooperative Education (1-5). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly BISC 590.

BIOL 592. Biological Field Studies (1-15). Prerequisite, post-graduate standing, permission of instructor. Individual or group off-campus experience in the field study of biological phenomena. May be taken more than once for a maximum of 15 credits. Grade will be S or U. Formerly BISC 593.

BIOL 593. Natural History Museum Techniques (1-5). Prerequisite, permission of instructor and Department Chair. Practicum in preparing, cataloging and maintaining natural history museum specimens and displays and curating museum collections. May be repeated up to a total of five credits. Formerly BOT 593.

BIOL 595. Graduate Research (1-10). Prerequisite, permission of instructor. Organization or conduct of an approved laboratory and/or field research problem. May be repeated. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly BISC 595.

BIOL 596. Individual Study (1-6). Prerequisite, permission of instructor. Formerly BISC 596/BOT 596/ZOOL 596.

BIOL 598. Special Topics (1-6). Formerly BISC 598/BOT 598/ZOOL 598.

BIOL 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, public presentation, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly BISC 700/BOT 700/ZOOL 700.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs. BIOL 540. Laboratory Studies in Plant Physiology (3), BIOL 541. Field Botany (3), BIOL 550. Current Advancements in Human Physiology (3), BIOL 551. Field Zoology (3), BIOL 560. Ecological Diversity in Washington (3.).

BUSINESS ADMINISTRATION

Office of the Chair
Steve Schepman, Ellensburg
Don R. Nixon, SeaTac
F. Lynn Richmond, Lynnwood

General Information

The Business Administration Department does not offer any graduate courses or graduate degrees.

Graduate Courses in Business Administration

The following course is on reserve and may be offered subject to program needs: BUS 515 Organization and Environment (5).

Graduate Courses in Management

MGT 505. Customer Value/Leadership (5). Developing accountants as business advisors. Assessment and delivery of customer value, quality, and human resource management. Customer value survey of accounting firm client.

MGT 525. Strategic Management/Business Simulation (5). Developing accountants as business advisors. Performance measurement, financing, and overall corporate strategy. Business simulation involving professionals.

CHEMISTRY

Graduate Faculty

Chair: Carin Thomas
Science Building 302 G

Graduate Program Coordinator

Anthony Diaz

Professors

David G. Lygre, Biochemistry
JoAnn DeLuca, Physical, Organic

Associate Professors

Martha J. Kurtz, Science Education
Carin Thomas, Biochemistry, Organic

Assistant Professor

Eric Bullock, Physical
Anthony Diaz, Inorganic, Solid State
Levente Fabry-Asztalos, Organic, Medicinal
Anne Johansen, Environmental, Analytical

Master of Science

Chemistry

Program Objectives and Descriptions

The graduate program in chemistry is tailored to satisfy individual student aspirations and is designed to provide knowledge, skills and discovery within the chemical sciences. The program prepares candidates for professional employment in chemistry careers including industry, consulting, local, state and federal government, and for teaching at the community college or secondary level. Additionally, the program provides a foundation for further graduate studies beyond the M.S. level in chemistry and related fields. Graduate students in chemistry can focus their studies in any of the major areas of chemistry, including biochemistry, organic, physical, analytical and inorganic chemistry, and chemistry education. Emphasis in a specific area through appropriate courses and seminars is enhanced by requisite graduate research. Practical and collaborative internship experiences through industrial, governmental, academic research or community college teaching partnerships are possible. The department utilizes state-of-the-art and fully equipped laboratory facilities with an array of modern instrumentation and computation capabilities. Furthermore, it operates a state certified environmental testing laboratory and maintains a radiochemistry laboratory.

Program Admission Requirements:

Incoming students are expected to meet the requirements set forth by the Graduate School, have earned an undergraduate degree in chemistry or a related field (equivalent to those offered at Central Washington University; see requirements for

the B.S. and B.A. degrees in chemistry), and demonstrate a potential for superior scholarship. Applicants must provide Graduate Record Examination (GRE) scores for the General test. Scores from the Chemistry Subject Test may be requested in special cases. If a chemistry background deficiency exists at the time of student admission, it must be removed during the first year of graduate study without graduate credit. International students for whom English is a second language must provide TOEFL scores to demonstrate English proficiency.

Community College Transfer Program:

Community college transfer students with an appropriate background (an A.A. degree including essential chemistry, mathematics, and physics coursework) may earn B.S. or B.A. and then M.S. degrees over the course of approximately three years. A similar effort may be accomplished by CWU students. These degrees are achieved in an accelerated fashion and are individualized according to the specific background and focus of the student. For additional information, contact the Chemistry Graduate Program Coordinator.

Program Requirements: The M.S. degree in Chemistry requires a minimum of 45 credits of graduate coursework and research study culminating with a thesis. Sixteen of these credits are research and thesis related (CHEM 595, CHEM 700). The remaining 29 credits are earned from coursework (a minimum of 18 at the 500 level or above). Of the 29 credits, students are required to take at least 9 core credits in chemistry, enroll in CHEM 503, Introduction to Research, during the Fall quarter of their first year, and take at least one credit of CHEM 505, Current Topics in Chemistry. Four credits of seminar (CHEM 589 taken twice) are also required. This leaves 14 credits for elective courses. Candidates must also pass a final oral examination on their thesis project and coursework that is administered by candidate's graduate thesis committee, and prepare a written thesis documenting their graduate research. Normal completion of the Master of Science requires two academic years and an intervening summer of study.

Electives: Fourteen credits of elective coursework at the 400 or 500 level are required for the M.S. degree in chemistry. Elective courses are selected with advising from the thesis committee and provide expertise in the fields of the individual student's academic interests and research focus and complement professional goals. Elective topics offered by the Chemistry Department include biochemical toxicology, mechanistic organic chemistry, organic synthesis, environmental chemistry, solid-state chemistry, analytical instrumentation, graduate physical chemistry and chemistry

education. Elective courses from other departments (Biology, Geology, Mathematics, Physics and Psychology among others) may be selected with graduate committee approval.

Graduate Committee: Before the end of the candidate's second quarter in the program and after consultation with all members of the chemistry graduate faculty, the student will select a thesis advisor to act as chair of the candidate's graduate committee. The candidate, in consultation with the selected thesis advisor will assemble a three member thesis graduate committee; two members of the committee must be from the Department of Chemistry.

Examination: Each candidate must pass a final oral examination on all phases of the student's program. The review covering the student's thesis and coursework consists of a seminar open to the public followed by queries from the thesis committee.

Required Courses:	Credits
CHEM 503, Introduction to Research	1
CHEM 505, Current Topics in Chemistry	1
CHEM 589, Graduate Student Seminar	4
CHEM 595, Thesis Research	10
CHEM 700, Thesis	6
Nine credits in Chemistry	9
Electives to be selected by advisement	14

Program Total 45

Graduate Courses in Chemistry

CHEM 500. Professional Development (1-5). Development topics and issues for in service and continuing education of professionals. Not applicable to degrees not institutional requirements for endorsements or teaching certificates offered through the university.

CHEM 503. Introduction to Research (1). An overview of the original research work being done in the department of chemistry. Class meetings are comprised of presentations by different faculty members.

CHEM 505. Current Topics in Chemistry (1). Prerequisite, graduate status or permission of instructor. Restrictions, may be repeated for credit when subject matter differs to a maximum of 5 credits.

CHEM 510. Enzymology (3). Prerequisites, CHEM 432 or equivalent. Principles of enzyme purification, kinetics, reaction mechanisms, and regulation. Three lectures weekly.

CHEM 511. Advanced Biochemistry (3). Prerequisites, CHEM 362 and CHEM 432 or BIOL 320, and/or permission of instructor. A course in advanced biochemical concepts focusing on current topics in metabolism, membrane transport systems, electron transport, oxidative

- phosphorulation, and DNA using mitochondria as a model system.
- CHEM 512. Biochemical Toxicology (3).** Prerequisites, CHEM 362 and CHEM 431; CHEM 432 or BIOL 320 and/or permission of instructor. An introduction to the principles of toxicology followed by a survey of the biochemical mechanisms involved in cytotoxicity including reactive intermediates and their interaction with macromolecules. Same as CHEM 498, Biochemical Toxicology, may not receive credit for both.
- CHEM 540. Survey of Chemical Education Research (3).** This course is designed to give students basic understanding of the issues and concerns of current research in chemical education.
- CHEM 541. Topics in Chemical and Science Education (3).** This course is designed to lead students on a detailed explanation on one aspect of teaching or research in chemical/science education. May be repeated for credit with instructor permission.
- CHEM 542. Teaching Chemistry at the Community Colleges (3).** This course is designed to give students a working knowledge of teaching chemistry at the community college.
- CHEM 550. Advanced Analytical Chemistry (3).** Prerequisite, CHEM 452. Statistics in chemical analysis; quality control and assurance methodologies; government certification protocols; sampling and preservation; contamination and loss; process analytical chemistry; chemometrics; current analytical methodologies.
- CHEM 551. Atmospheric Chemistry (3).** Prerequisite, CHEM 382. The chemistry of the stratosphere and troposphere; chemistry of the atmospheric aqueous; the meteorology of air pollution; cloud microphysics; mathematical chemical/transport modeling.
- CHEM 552. The Chemistry of Natural Waters (3).** Prerequisites, CHEM 251 and CHEM 382 or by permission of instructor. A study of the chemical reactions that lead to the steady state and/or equilibrium composition of natural waters.
- CHEM 561. Organic Reaction Mechanisms (3).** Prerequisites, CHEM 363 or the equivalent, CHEM 383 or permission of the instructor. An examination of several classes of organic reactions mechanisms, with an emphasis on the reaction intermediates, and on the methods used for studying reaction pathways.
- CHEM 562. Physical Organic Chemistry (3).** Prerequisites, CHEM 363 or the equivalent, CHEM 383 or permission of the instructor. An introduction to the modern study of organic structures and organic reaction pathways, with an emphasis on computational and physical methods.
- CHEM 563. Advanced Synthetic Methods (3).** Prerequisites, CHEM 363 or equivalent or permission of the instructor. A detailed survey of modern synthetic methods in organic chemistry, their application in multi-step transformations and development of synthetic rationale in extended total synthesis.
- CHEM 564. Medicinal Organic Chemistry (3).** Prerequisites, CHEM 363 and CHEM 431 or equivalent or permission of the instructor. A multi-component study of drugs and other biologically potent materials in terms of chemical synthesis, radiochemistry, biochemical evaluation and biological and-receptor interactions.
- CHEM 570. Advanced Inorganic Chemistry (3).** Prerequisites, CHEM 350 and CHEM 363. An in depth review of the structure, bonding, spectroscopy and reactivity of inorganic compounds, with emphasis on those of the main group elements.
- CHEM 571. Topics in Solid State Chemistry (3).** Prerequisites, CHEM 350 and CHEM 382. A survey of the structures and properties of inorganic solids: crystallography, X-ray diffraction, phase equilibria, electronic structure and luminescence.
- CHEM 575. Chemical Applications of Group Theory (3).** Prerequisites, CHEM 350 and CHEM 363. An introduction to group theory and its applications toward molecular symmetry, bonding and spectroscopy.
- CHEM 581. Thermodynamics (3).** Prerequisites, Mathematics through multivariable calculus; CHEM 383 or equivalent. Three lectures weekly. Principles of thermodynamics: basic theories, methods and applications.
- CHEM 582. Chemical Kinetics (3).** Prerequisites, Mathematics through multivariable calculus, CHEM 383 or equivalent. Three lectures weekly. Principles of chemical kinetics: basic theories, methods and application.
- CHEM 583. Quantum Chemistry (3).** Prerequisites, Mathematics through multivariable calculus, CHEM 383 or equivalent. Three lectures weekly. Principles of quantum chemistry: basic theories, methods and applications.
- CHEM 589. Graduate Student Seminar (2).** May be repeated for credit. A one hour professional seminar encompassing a contemporary topic is provided to the department and campus community.
- CHEM 590. Cooperative Education (1-5).** Prerequisites, undergraduate degree and permission of graduate coordinator. Practical experience by employment in a chemistry-related industrial, governmental, or instructional setting.
- CHEM 592. Laboratory Experience in Teaching Chemistry (2).** Prerequisite, permission of instructor. Practical experience in teaching chemistry laboratories. An introduction to teaching, teaching philosophies, safety and hazardous waste management. May be repeated for credit for only 2 credits may be applied to the chemistry MS degree.
- CHEM 595. Graduate Research (1-10).** Prerequisite, permission of instructor. May be repeated for credit.
- CHEM 596. Individual Study (1-5).** Prerequisites, permission of instructor and thesis committee. May be repeated for credit.
- CHEM 598. Special Topics (1-6).** May be repeated for credit under a separate title.
- CHEM 599. Graduate Seminar (1).** May be repeated for credit.
- CHEM 700. Master's Thesis, Project Study and/or Examination (1-6).** Prerequisites, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

Chemistry Graduate Courses on Reserve:
CHEM 515. Biochemical Methology (3).

COMMUNICATION

Graduate Faculty
Chair: Corwin P. King
Bouillon 232

Professors
Philip M. Backlund, Speech Communication
Corwin P. King, Speech Communication,
Public Relations

Associate Professor
Michael Ogden, Speech Communication

General Departmental Information

The Communication Department does not offer any graduate degrees.

Graduate Courses in Communication

COM 598. Special Topics (1-5).
COM 599. Seminar (1-5). May be repeated.

COMPUTER SCIENCE

Graduate Faculty
Chair: James Schwing
Hebeler 219

Professors

Boris Kovalerchuk, Artificial Intelligence, Simulation and Optimization, Computer Architecture

James Schwing, Parallel Algorithms, User Interface Design, Computer Graphics, Computer Aided Design

Associate Professor

Edward Gellenbeck, User Interface Design, Web Development, Software Engineering

General Departmental Information

The Computer Science Department does not offer any graduate degrees.

Graduate Courses in Computer Science

CS 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

ECONOMICS

Co-Chairs: Robert Carbaugh and Koushik Ghosh
Shaw-Smyser

Professors

Donald J. Cocheba, Resource Economics and Regional Development

Richard S. Mack, Resource Economics and Regional Development

Associate Professor

Koushik Ghosh, Macroeconomics, Public Finance and Econometrics

General Departmental Information

The Economics Department does not offer any graduate degrees, but cooperates in offering Economics and Resource Management graduate courses.

Graduate Courses in Economics

ECON 552. Managerial Economics (5). Application of microeconomic theories to managerial decisions.

EDUCATION

General Information

The Master of Education degree program is designed primarily for elementary and secondary school teachers and school service personnel. Since the program may also prepare the student for community college teaching and for advanced study, the student should seek advice from the program advisors. For advice regarding specializations, contact the appropriate department.

Admission Requirements

In addition to general requirements for admission to Master's programs, students desiring admission to programs in education must meet departmental requirements. Members of the appropriate department will review the student's application materials from the Office of Admissions and, if deemed necessary, may meet with the student before a recommendation for admission can be made.

Required Educational Foundations and Research Courses

EDF 510 is required of all students earning the M.Ed. degree. The candidate further must choose at least six credits from the following: EDF 501, Educational Foundations; EDF 502, History of Education; EDF 503, Philosophy of Education; EDF 504, Advanced Educational Statistics; EDF 505, Educational Measurement for Teachers; EDF 506, Education Futurism; EDF 507, Studies and Problems in Intercultural Education; EDF 508, Comparative Education; EDF 567, Educational Change; PSY 552, Advanced Human Growth and Development; PSY 559, Advanced Educational Psychology (Only one of PSY 552 or PSY 559 may be included to meet the foundations requirement); SOC 525, Society and Education; as approved by the student's graduate advisor or committee Chair. Related courses may be substituted with permission of the student's graduate advisor or committee Chair, the Chair of the appropriate department and the Associate Vice President of Graduate Studies and Research.

CENTER FOR TEACHING AND LEARNING

The Center for Teaching and Learning is the NCATE accredited unit that provides oversight for all CWU school personnel preparation programs. The CTL is intended to facilitate communication between and among the respective disciplines that contribute to the preparation of educators. CTL programs include the preparation of teachers, school administrators, school counselors, and school psychologists.

CURRICULUM AND SUPERVISION

Faculty

Chair: Osman Alawiye, Ph.D., J.D.
Black 101-5

Professors

Osman Alawiye, Ph.D., J.D., Curriculum and Instruction, Law

Steven A. Schmitz, Ed.D., Curriculum and Instruction

Henry Williams, Ed.D., Curriculum and Instruction

Associate Professors

Kim M. Jones, Ph.D., Curriculum and Instruction, Supervision

Dennis Martinen, Ed.D., Curriculum and Instruction, Supervision

Barbara A Phillips, Ph.D., Curriculum and Instruction, Supervision, Administration

Don B. Woodcock, Ph.D., Curriculum and Instruction, Supervision

Assistant Professors

Merwin Britto, Ph.D., Instructional Technology

Ian Loverro, Ph.D., Curriculum and Instruction

Steve Nourse, Ed.D., Curriculum and Instruction, Supervision

Lee Plourde, Ph.D., Curriculum and Instruction, Supervision, Administration

Lecturers

Janie Matheson

Kay Prather

Karen Roberts

Tamsin Swain

Cindy Vielbig

Master of Education

Master Teacher

The Master Teacher is a program of advanced preparation for classroom teachers intending to become teacher scholars and to assume positions of leadership within their

schools with respect to the development of curriculum, instructional strategies, and related classroom concerns.

The program is diversified to allow students to select an area of emphasis within the three concentrations of elementary, middle school, or secondary teaching.

Program. The student will complete at least 45 credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. The development of a Course of Study most appropriate to the professional goals and purposes of each individual student is encouraged.

Required Courses	Credits
*Educational Foundations and Research Courses.....	9
EDBL, EDCS, EDEL, or EDF 700, Thesis (or option).....	6
Area of emphasis and related study (see guidelines following).....	30
*See Required Foundations and Research Courses under General Information.	

Program Total 45

Elementary Teaching

This concentration is designed for teachers in the elementary grades.

Students in consultation with an advisor will design a Course of Study appropriate to their professional goals, comprising the professional required Educational Foundation and Research courses, thesis or option, and 30 credits. Normally at least 15 credits (variable 12-18) from one of the following areas of emphasis:

1. Teaching strategies, curriculum and materials (e.g., EDCS 513, 539, 542, 545, 565, EDRD 421, 521, 526, 528, 592.1, EDEL 531, 551, 562, EDSE 521, 522, TH 420, MATH 552, 560, SCED 422, EDEL 420);
2. Media (e.g., EDCS, 516, 550, 578)
3. Bilingual Ed. (e.g., EDF 507, EDBL 512, 518, 556 plus language arts option courses or special education option courses);
4. Contemporary trends (e.g., EDAD 583, EDF 506, EDSE 512).

Middle School Teaching

This concentration is designed for teachers in middle and junior high schools comprising ages 11-14 (grades 5-8).

Normally 15 credits (variable 12-18) of related studies will be selected from an academic field or fields in which the student wishes to become more proficient. An exception may be made if the student has had appropriate previous advanced study (e.g., fifth year or other post-baccalaureate work). If related studies are not taken, then work in the areas of emphasis will be expanded accordingly.

Normally 15 credits (variable 12-18) of

coursework selected from at least one of the following areas of emphasis:

1. Teaching strategies, curriculum, and materials (e.g., EDAD 563, EDCS 513, 539, 542, 545, 582, EDRD 526, 528, 592.1, SOSC 520);
2. Evaluation and counseling (e.g., EDAD 560, 566, EDCS 487, 488, 505, 543, 544, EDF 504, PSY 552, 559, 569, 573);
3. Media (e.g., EDCS 516, 550, 578);
4. Contemporary trends (e.g., EDAD 583, 588, EDF 401, 506, 567, EDCS 432, 571, EDSE 512).

Secondary School Teaching

This concentration is designed for teachers in high schools comprising ages 14-18 (grades 9-12). One of the student's graduate committee members must be from the academic field.

Normally 15 credits (variable 12-18) of related studies will be selected from an academic field in which the student wishes to become more proficient. An exception may be made if the student has had appropriate previous advanced study (e.g., fifth year or other post baccalaureate work). If related studies are not taken, then work in the areas of emphasis will be expanded accordingly.

1. Teaching strategies, curriculum, and materials (e.g., EDCS 424, 513, 539, 545);
2. Evaluation and counseling (e.g., EDAD 560, 566, EDCS 487, 488, 543, 544, EDF 504, 505, PSY 552, 559, 569, 573);
3. Media (e.g., EDCS 516, 550, 578);
4. Contemporary trends (e.g., EDAD 583, 588, EDF 401, 506, 567, EDCS 571, EDSE 512).

Library Media--All Levels, Supporting Endorsement

This is a program to qualify students to become Library Media Specialists for K-12 schools in Washington State.

Required Courses	Credits
EDCS 450, Media Development.....	3
EDCS 516, Advanced Media Utilization... 3	3
EDCS 578, Administration of Media/Technology Programs.....	3
EDCS 596, Individual Study (practicum) ..	3
EDCS 526, Instructional Methods for Library Media Specialists.....	3
EDCS 536, Selecting Literature for Children and Young Adults.....	3
EDCS 548, Collection Development for Library Media Specialists.....	3
EDCS 558, Cataloging and Classification for Library Media Specialists.....	3
EDCS 568, Information Storage and Retrieval.....	3

Total 27

TEACHER EDUCATION PROGRAMS

Faculty

Chair: David Shorr, Ph.D.
Black 101

Professors

- Minerva L. Caples, Ed.D., Elementary/Bilingual Education
- James DePaepe, Ph.D., Special Education
- Susan Donahoe, Ph.D., Reading/Language Arts
- Dan Fennerty, Ed.D., Special Education
- Gail Goss, Ed.D., Reading/Elementary Education
- Nancy Jurenka, Ed.D., Elementary Education/Reading
- David Majsterek, Ed.D., Special Education/Early Childhood Education
- Jack McPherson, Ph.D., Administration
- James G. Pappas, Ed.D., Administration
- Debra Prigge, Ed.D., Special Education
- David Shorr, Ph.D., Early Childhood Education
- Alberta Thyfault, Ph.D., Special Education

Associate Professors

- Carol Butterfield, Ph.D., Elementary Education/Reading/Bilingual Education/TESL
- Christina Curran, Ph.D., Special Education
- Cory Gann, Ph.D., Early Childhood Education
- Connie Lambert, Ph.D., Special Education
- Keith Salyer, Ph.D., Elementary Education
- Andrea Sledge, Ph.D., Reading

Assistant Professors

- Leland Chapman, Ph.D., Administration
- Catherine Connery, Bilingual Education/TESL
- Tina Georgeson, Ed.D., Elementary Education/Early Childhood Education
- Craig Hughes, Ph.D., Bilingual Education/TESL
- Gary Shelly, Ph.D., Administration

Master of Education

Administration

School Administration

Program: This program prepares teachers for the initial principal's certificate. Two options are available: General school administration option and general school administration with a bilingual education specialization option. A student shall complete at least 56 credits in an approved Course of Study to be developed in consultation with the graduate advisor. Refer to the section on general Master's degree regulations for general requirements.

The Master of Education School Administration program provides options for the various school levels, but does not necessarily qualify the student for the Initial Principal's Certificate, which requires that an applicant complete an application and be accepted to the Administrator Certification Program and complete the 16 credit internship as described under EDAD 692 and 693.

General School Administration Option

The General School Administration program prepares individuals who can provide appropriate leadership and direction to the school professional staff and to the community by (1) developing a unified system for managing human resources; (2) developing long-range plans, policies and goals; and (3) executing the policies developed by the district.

Prerequisite: One year of successful contracted teaching experience in a K-12 classroom setting is required for admissions to the General School Administration Option.

Students are not allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program.

Required Courses	Credits
Educational Foundations and Research Courses (to include *EDF 507)	9
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 582, School Curriculum	5
EDAD 583, School and Community	5
EDAD 584, School Personnel	5
EDAD 586, The Principalship	5
EDAD 589, School Law	5
EDAD 700, Thesis or option	6
EDSE 512, Educational Rights of Individuals with Disabilities	3
Advisor Approved Electives	3

Program Total 56

*See your advisor if you have completed recent graduate coursework in Intercultural Education (i.e., EDF 507).

General School Administration with a Bilingual Education Specialization

This program prepares school principals to serve in schools with large numbers of limited English proficient students. Completion of the specialization requires appropriate field activities and a graduate level core of bilingual education coursework.

Prerequisites: The student must have an endorsement in Bilingual Education, English

as a Second Language or designated world (foreign) language and one year of successful, contracted teaching experience in a K-12 classroom setting is required for admission to the General School Administration with a Bilingual Education Specialization program.

*Students will not be allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program.

Required Courses	Credits
Educational Foundations and Research Courses (to include *EDF 507)	9
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 582, School Curriculum	5
EDAD 583, School and Community	5
EDAD 584, School Personnel	5
EDAD 586, The Principalship	5
EDAD 589, School Law	5
EDAD 700, Thesis or option	6
EDSE 512, Educational Rights of Individuals with Disabilities	3
EDBL 512, Legal Rights of the Limited English Proficient	2
EDBL 518, Studies and Problems in Educational Linguistics	2
EDBL 556, Bilingual Education Curriculum	3
Advisor Approved Electives	3

Program Total 63

NOTE: See your advisor if you have completed recent graduate coursework in Intercultural Education (i.e., EDF 507).

Master of Education Instructional Leadership

Program. A student shall complete at least 56 credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. The development of a Course of Study most appropriate to the professional goals and purposes of each individual student is encouraged.

Students will not be allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program.

Required Courses	Credits
Educational Foundations and Research Courses (to include *EDF 507)	9
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 582, School Curriculum	5
EDAD 583, School and Community	5
EDAD 584, School Personnel	5
EDAD 589, School Law	5
EDAD 700, Thesis (or Option)	6
EDSE 512, Educational Rights of Individuals with disabilities	3

Advisor Approved Electives 8

Program Total 56

*See your advisor if you have completed recent graduate coursework in Intercultural Education (i.e., EDF 507).

Master of Education Reading Specialist

The following college-level courses should be taken prior to enrollment in the specialization courses and may not be counted as part of the required credits in the reading specialist program:

- Basic Reading Course
- Basic Language Arts Course
- Basic Children's Literature Course

Program.

Prerequisite. A minimum of one year of teaching experience prior to completion of the program is required. The student shall complete at least 45 credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research.

Required Courses	Credits
Education Foundations and Research Courses	9
EDRD 700, Project Study or Thesis	6
*EDCS 424, Reading in the Content Fields	3
EDRD 521, Reading in the Elementary School	4
EDRD 523, Survey of Research in Reading	3
EDRD 525, Psychology of Reading	3
EDRD 526, Diagnosis of Reading Difficulties	3
EDRD 528, Remediation of Reading Difficulties	3
EDRD 592, Practicum: Diagnosis and Remediation of Reading Difficulties	3
Advisor Approved Electives selected from, but not limited to the list below	8
EDRD 418, Reading and Linguistics (3)	3
EDRD 419, Storytelling Techniques (3)	3
EDRD 520, Advanced Teaching of Reading: Methods and Materials (3)	3
EDRD 527, Whole Language Approach to Teaching Reading (3)	3
EDEL 531, Teaching Elementary School Language Arts, Advanced (3)	3
EDRD 532, Organization and Administration of Reading Programs (3)	3
EDAD 584, School Personnel (5)	5
EDRD 599, Seminar (1-5)	5
EDBL 440, Reading English as a Second Language (3)	3

Program Total 45

*If this course is completed prior to admission to the graduate program, see an advisor for an appropriate course substitution.

**Master of Education
Special Education**

The Master of Education with specialization in Special Education is designed to allow students to pursue graduate level study in the various areas of special education.

Prerequisites: Students must have an institutional endorsement in Special Education or a minimum of one year teaching experience in a special education classroom as a certified teacher. Students without an institutional endorsement will be required to take appropriate background courses. One year of successful teaching prior to taking the final 15 credits of coursework is also required. Students must submit documented evidence of teaching experience to their program advisor.

Program. Students will complete at least 45 credits of approved graduate level coursework. The Course of Study will be developed in consultation with their major advisor from special education and filed with the Office of Graduate Studies and Research.

Required Courses	Credits
Education Foundation and Research Courses	9
EDSE 700, Thesis (or option)	6
EDSE 501, Orientation, Foundation, and Issues	2
EDSE 503, High Prevalence Categories of Exceptionality	3
EDSE 512, Educational Rights of Individuals with Disabilities	3
EDSE 521, Functional Assessment	3
EDSE 522, Collaborative Consultation	3
EDSE 523, Curriculum for Students with Special Needs	3
EDSE 585, Administration and Supervision of Programs for Students with Disabilities	3
EDSE 684, Internship in Professional Affiliated Disciplines	4
Area of Concentration (by Advisement)	
EDSE 597, Graduate Research in Special Education	4
EDSE 583, Seminar: Graduate Research Issues in Special Education	2

Program Total 45

**Administrative Certificates in
Education**

**The Initial Principal's
Certificate**

This certification program is available to individuals who already possess a Master's degree or who are currently working on a M.Ed. in school administration or Instructional Leadership. Three years of successful, contracted teaching experience in a K-12 educational setting within the most recent five years is required before admission to the program is granted. Contact the School Administration Program Director for details and admission information.

*Students are not allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program.

Required Courses:	Credits
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 582, School Curriculum	5
EDAD 583, School and Community	5
EDAD 584, School Personnel	5
EDAD 586, The Principalship	5
EDAD 589, School Law	5
EDAD 692 and 693, Internship in School Administration	16

Program Total 51

Additional courses may be required (e.g., special education and/or multicultural education) depending upon the background and experience of individual students.

**Initial Program Administrator
Certificate (Instructional
Leadership)**

This certification program is available to individuals who already possess a Master's degree OR who are currently working on a M.Ed. in school administration or Instructional Leadership. Contact the School Administration Program Director for details and admission information.

*Students are not allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program.

Required Courses:	Credits
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 582, School Curriculum	5
EDAD 583, School and Community	5
EDAD 584, School Personnel	5
EDAD 589, School Law	5

EDAD 694, Internship in Improvement of Instruction & Curriculum Development	16
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Program Total 46

Additional courses may be required (e.g., special education and/or multicultural education) depending upon the background and experience of individual students.

**Initial Program Administrator
Certificate (Special Education)**

Contact the school administration program director for details and admission information. Students will not be allowed to register for EDAD courses until they have been fully admitted into either the Masters Degree Program or the Administrator Certificate Program. Candidates must, in addition to a Master's degree in either Special Education, or a related field, complete the following courses:

Required Courses:	Credits
EDAD 580, Educational Administration	5
EDAD 581, Public School Finance	5
EDAD 584, School Personnel	5
EDSE 512, Educational Rights of Individuals with Disabilities	3
EDSE 585, Administration & Supervision of Program for Students with Disabilities	3
EDSE 682 and 683, Internship in Special Education School Admin.	16

Program Total 37

Additional courses may be required (e.g., multicultural education) depending upon the background and experience of individual students.

**Post-Baccalaureate University
Certificate: Teaching and
Linguistic Diversity**

Students entering the public school setting speaking little or no English are the fastest growing segment of the school population. Most mainstream teachers have received little or no special training in preparing them for these students. This program will provide the opportunity for practicing teachers to receive this needed training. This training will take place through the development and implementation of four courses. Upon completion of the program, students will be able to explain how programs have come to exist as they are found today, document the theories upon which sound educational practices are based, develop and implement quality instruction, organize and use appropriate assessment procedures, and use paraprofessional and community members as quality assets in the classroom. While the program

itself does not constitute a State of Washington endorsement, all courses could be applied to the completion of endorsement requirements at Central Washington University.

Required Courses	Credits
EDBL 514, Introduction to Linguistic Diversity in Education.....	3
EDBL 530, Sheltering in Mainstream I: Methods.....	3
EDBL 531, Sheltering in Mainstream II: Assessment and Resources.....	3
EDBL 440, Reading English as a second Language.....	3
Total	12

Center for Teaching and Learning Courses

- ECTL 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.
- ECTL 601. Professional Certificate: Pre-Assessment Seminar (4).** Candidates attending the seminar will review required standards and criteria and identify evidence/indicators to meet each criterion. The seminar will cumulate with approval of the candidate's Professional Growth Plan.
- ECTL 609. Professional Certificate: Culminating Seminar (2).** Candidates attending the seminar will submit a portfolio of evidence to the Professional Growth Team. If the portfolio meets all requirements, the team will recommend the candidate for Professional Certification.

Professional Development Courses

- EDCE 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. Formerly ED / EDAD / EDBL / EDEC / EDEL/EDRD/EDSE 500.

Graduate Courses in Education Administration

- EDAD 560. Teacher Evaluation (3).** Evaluation of classroom instruction including observations, pre-conferences, interview skills, and feedback techniques. Formerly ED 560, students may not receive credit for both.

EDAD 563. Middle School Curriculum (4). Formerly ED 563, students may not receive credit for both.

EDAD 566. Evaluation of the School Program (3). Formerly ED 566, students may not receive credit for both.

EDAD 580. Educational Administration (5). Prerequisite, one year of teaching experience. An examination of administrative theory, principles, concepts, and processes, and the administration of educational programs and services. Formerly ED 580, students may not receive credit for both.

EDAD 581. Public School Finance (5). Prerequisite, one year of teaching experience. An examination of writing educational grants and contracts. Students will build budgets and become familiar with various types and use of state funds. Formerly ED 581, students may not receive credit for both.

EDAD 582. School Curriculum (5). Prerequisite, EDAD 580 or permission of the instructor. Examination of school curriculum for the improvement of instructional and student learning.

EDAD 583. School and Community (5). Prerequisite, one year of teaching experience. An in depth examination of the relationship between the school and community for the improvement of instruction and student learning. Formerly ED 583 students may not receive credit for both.

EDAD 584. School Personnel (5). Prerequisite, EDAD 580 or permission of the instructor. Development of observation skills, assessment skills, and the ability to work with teachers for the improvement of instruction and student learning. Formerly ED 584, students may not receive credit for both.

EDAD 585. Public School Finance-Advanced (3). This course provides an in-depth study of revenue sources, tax theory, and distribution formulas. A comparative review of methods of apportioning funds is included to provide a basis for analyzing the Washington problem. Program planning and budgeting systems are emphasized. The current press for accountability, cost effectiveness, and systems for assessing quality of performance are considered. Formerly ED 585, students may not receive credit for both.

EDAD 586. The Principalship (5). Prerequisite, one year of teaching experience. The administration of elementary, middle, junior high and high schools. Covers common elements and those unique to specific levels. Formerly ED 586, students may not receive credit for both.

EDAD 587. Educational Grants Management and Budget (3). Formerly ED 587, students may not receive credit for both.

EDAD 588. Politics of Education (3). Formerly ED 588, students may not receive credit for both.

EDAD 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDAD 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. Formerly ED 591.

EDAD 593. Systems Approach to School Administration (3). General overview, definitions, and understanding of administrative and budgeting systems. Formerly ED 593, students may not receive credit for both.

EDAD 589 School Law (5). Prerequisite or corequisite, EDAD 580 or permission of instructor. This course helps school practitioners anticipate and identify common legal problems and issues in education. Prepares students to use legal decisions to assist individuals with disabilities in creating an appropriate educational environment. Formerly ED/EDAD 594, students may not receive credit for more than one.

EDAD 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED SPED 596.

EDAD 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDAD 598. Special Topics (1-6). Formerly ED/SPED 598.

EDAD 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDAD 692. Pre Autumn Internship in School Administration (4). Prerequisites, minimum of three years of successful teaching experience, EDAD 580 and 586. Emphasis on the principal's responsibilities prior to and during the opening of the school year. Permission to register only after approval of Department Chair. Combines with EDAD 693 for 16 total credits in administrative internship. Grade will be S or U. Formerly ED 692, students may not receive credit for both.

EDAD 693. Internship in School Administration (4-16). Prerequisites, minimum of

three years of successful teaching experience, EDAD 580 and 586. (Meets the laboratory and internship requirements outlined by the State Board of Education for candidates for principal's credentials.) Permission to register only after approval of Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master's degree. Combines with EDAD 692 for 16 total credits in administrative internship. Formerly ED 693, students may not receive credit for both.

EDAD 694. Internship in Improvement of Instruction and Curriculum Development (4-16). (Meets the laboratory and internship requirements outlined by the State Board of Education for candidates for a program administrator's credential in supervision instruction, and curriculum development specializations.) Permission to register only after approval of the Department Chair. Grade will be S or U. Credits earned in an administrative internship may not exceed a total of 16. Not more than four credits are applicable to credit requirements for the Master's degree. Formerly ED 694, students may not receive credit for both.

EDAD 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Bilingual Education

EDBL 512. Legal Rights of the Limited English Proficient (2). Historical developments and legal foundations in bilingual education with particular attention to Washington state law and federal legislation. Formerly ED 512, students may not receive credit for both.

EDBL 514. Introduction to Linguistic Diversity in Education (3). This course provides mainstream classroom teachers the needed background theory to better the educational experience of linguistically diverse students.

EDBL 518. Studies and Problems in Educational Linguistics (2). Prerequisites, EDBL 433 or English as a Second Language (ESL) methods course, or equivalent, and classroom experience. Identification and study of problems related to educational linguistics and

second language instruction. Formerly ED 518, students may not receive credit for both.

EDBL 530. Sheltering in Mainstream I: Methods (3). This course provides mainstream classroom teachers the needed background information and methodology to better the educational experience of ESL students through the use of sheltered instruction.

EDBL 531. Sheltering in Mainstream II: Assessment and Resources (3). This course provides mainstream classroom teachers the needed background information and methodology to better the educational experience of ESL students by using classroom-based assessment and other resources.

EDBL 556. Bilingual Education Curriculum (3). Prerequisite, EDBL 435 or permission of instructor. Planning, implementation and evaluation of the bilingual education program curriculum for the elementary school. Formerly ED 556, students may not receive credit for both.

EDBL 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDBL 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 Credits can be applied towards a Master's program. Formerly ED 591.

EDBL 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDBL 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDBL 598. Special Topics (1-6). Formerly ED/SPED 598.

EDBL 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDBL 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Education-Curriculum and Supervision

EDCS 509. Service Learning (3). Student will use program of study content knowledge to improve a community situation. EDCS 509 and FCSG 509 are equivalent courses. May be repeated for credit.

EDCS 513. Creative Teaching (3). Prerequisite, teaching experience. Includes opportunity for creative expression as well as sharing creative teaching ideas, aids and methods. The purpose of the course is to help teachers become more imaginative and creative in planning, conducting and evaluating classroom instruction. Emphasis on classroom management and organization. Formerly ED 513, students may not receive credit for both.

EDCS 516. Advanced Media Utilization (3). Prerequisite, EDCS 316. Explores recent research, experimental programs and new developments in the utilization of media. Formerly ED 516, students may not receive credit for both.

EDCS 526. Instructional Methods for Library Media Specialists (3). Survey and learn instructional filled by Library Media Specialists and the instructional methods they employ: storytelling, creative drama, authoring software, effective presentation, literature appreciation, reading motivation, puppetry, library skills, independent learning skills, and information literacy skills.

EDCS 536. Selecting Literature for Children and Young Adults (3). Prospective school Library Media Specialists will learn how to develop quality children and young adult literature collections and programs.

EDCS 539. Educational Games (3). Prerequisite, graduate standing or one year of teaching experience. This course will emphasize the purpose and benefits of educational games and provide each student with experience in planning, developing, and presenting as well as playing, games of their own creation for use as an instructional tool. Participants will be responsible for any expense involved in the construction of their games. Formerly ED 539, students may not receive credit for both.

EDCS 542. Individualizing Instruction (3). Prerequisite, EDSE 311 or equivalent. Basic techniques appropriate to elementary and secondary schools.

EDCS 543. Teacher Counseling (3). Theory and techniques interviewing, advising and counseling: school personnel services, community and state special services.

EDCS 545. Classroom Teaching Problems (3). Prerequisite, teaching experience. Open to experienced teachers. Formerly ED 545, students may not receive credit for both.

EDCS 546. Advanced Laboratory Experience (2-5). Consult Chair of Department of Curriculum and Supervision for permission to register for this course. Formerly ED 546, students may not receive credit for both.

EDCS 548. Collection Development for Library Media Specialists (3). Explore the methods used and the issues and solutions involved in developing a collection in a school Library Media Center.

EDCS 550. Instructional Media Production II (5). Advanced instruction in the production of instructional materials including still and motion pictures. Emphasizes design as well as production skills. Formerly ED 550, students may not receive credit for both.

EDCS 558. Cataloging and Classification for Library Media Specialists (3). Cataloging and classification of library media materials with an emphasis on MARC records.

EDCS 565. Program of Curriculum Improvement (3). Formerly ED 565, students may not receive credit for both. **EDCS 569. Supervision of Student Teachers (3).** Prerequisite, one year of teaching experience. Formerly ED 569, students may not receive credit for both.

EDCS 568. Information Storage and Retrieval (3). Reference collection development and utilization with print, electronic, and on-line resources.

EDCS 571. Continuous Progress School (3). The relationship of the instructional program to levels of learning based on individual capacities and maturity.

EDCS 578. Administration of Media/Technology Programs (3). Develop skills and expertise needed to manage media/technology programs at school building, school district, college and university, and private sector levels.

EDCS 582. The Middle School (3). Middle School background, goals, programs, organizational patterns, staffing, facilities, and trends. Formerly ED 582, students may not receive credit for both.

EDCS 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDCS 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 Credits can be applied toward a Master's program. Formerly ED 591.

EDCS 595. The Community Junior College (3). Formerly ED 595, students may not receive credit for both.

EDCS 595A. Community College Instructional Problems (3). An analysis of the type of teaching applicable to the community college with an open door policy with special reference to lectures, assignments, uses of textbooks, programmed materials, newer media, student reports, quiz techniques, panel discussions, and preparations of instructional objectives, syllabi, and bibliography. Formerly ED 595.2, students may not receive credit for both.

EDCS 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDCS 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDCS 598. Special Topics (1-6). Formerly ED/SPED 598.

EDCS 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDCS 693A. Internship in Teaching-Guided Observation (4). Prerequisites, completion of a baccalaureate degree and admission to teacher education Introductory field experience.

EDCS 693B. Internship in Teaching-Guided Participation (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship represents the second phase in the developmental growth for practicing teacher interns.

EDCS 693C. Internship in Teaching-Guided Practice (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship course represents the third phase of the guided practice clinical field experience.

EDCS 693D. Internship in Teaching-Practice (3). Prerequisites, completion of a baccalaureate degree and admission to teacher education. This internship course represents the final experience component for certification.

EDCS 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Elementary Education

EDEL 531. Teaching Elementary School Language Arts, Advanced (3). Prerequisite, EDRD 420 or equivalent or permission of instructor. The current aspects of the elementary school language arts curriculum except reading. Formerly ED 531, students may not receive credit for both.

EDEL 551. Teaching Elementary School Mathematics, Advanced (3). Prerequisite, EDEL 323 or equivalent or permission of instructor. Research findings in mathematics education, number abilities needed by children; designing number experiences; desirable teaching procedures, selection and use of materials. Course content and experiences are designed for the experienced teacher or graduate level student. Formerly ED 551, students may not receive credit for both.

EDEL 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDEL 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. Formerly ED 591.

EDEL 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED/SPED 596.

EDEL 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDEL 598. Special Topics (1-6). Formerly ED/SPED 598.

EDEL 599. Seminar (1-5). May be repeated. Formerly ED/SPED 599.

EDEL 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Education Foundations

EDF 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. Formerly ED 500.

EDF 501. Educational Foundations (3). Provides a background in selected areas of sociological, historical, and philosophical foundations of education. Also considers current and emerging problems of education. Formerly ED 501, students may not receive credit for both.

EDF 502. History of Education (3). Background: historical development in America. Formerly ED 502, students may not receive credit for both.

EDF 503. Philosophy of Education (3). Various philosophic positions which lead to an understanding of the educational enterprise. EDF 503 and PHIL 503 are equivalent courses. Formerly ED 503. Students may not receive credit for more than one. Students may not receive credit for both ED/PHIL 467 and EDF/PHIL 503.

EDF 504. Advanced Educational Statistics (4). Use and interpretation of complex statistical principles. Formerly ED 504, students may not receive credit for both.

EDF 505. Educational Measurement for Teachers (3). Designed primarily for graduate students. Emphasis is on formal and informal measurement. Test theory, formative and summative evaluation; criterion and norm referenced measurements, and construction and use of classroom tests are emphasized. Formerly ED 505, students may not receive credit for both.

EDF 506. Education Futurism (3). A study of the literature on alternative futures in American society and their possible impacts upon education. The methods of creative forecasting or future research. The desirability of deciding between alternative futures in education and the methodology of helping to bring about the more desirable future. Futurism in elementary and secondary schools. Formerly ED 506, students may not receive credit for both.

EDF 507. Studies and Problems in Intercultural Education (3). Research and analysis of models in intercultural and interpersonal school relations. Awareness of the student-teacher relation in creating school climate in multicultural settings. Analysis of the principles used to interpret these interactions, and practice in brief interventions involving staff, teachers and students. Formerly ED 507, students may not receive credit for both.

EDF 508. Comparative Education (3). A comparative look at national systems of education. Formerly ED 508, students may not receive credit for both.

EDF 510. Educational Research and Development (3). A study of the types, methodology, and uses in practice of educational research and development skills pertinent to the design and execution of research thesis and education developmental projects. Formerly ED 510, students may not receive credit for both.

EDF 511. Planning for Learning (3). Principles of planning, instruction, curriculum development, and pedagogy used in teaching primary, middle, and secondary level students.

EDF 567. Educational Change (3). Education change; barriers, characteristics, trends, processes; role of change agent in school organization; leadership techniques for facilitating change. Formerly ED 567, students may not receive credit for both.

EDF 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDF 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. Formerly ED 591.

EDF 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDF 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDF 598. Special Topics (1-6). Formerly ED, SPED 598.

EDF 599. Seminar (1-5). May be repeated. Formerly ED, SPED 599.

EDF 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Reading Education

EDRD 520. Advanced Teaching of Reading: Methods and Materials (3). Prerequisites, a reading methods course at the undergraduate level and teaching experience. An in-depth research-based analysis of reading methods and materials used in elementary and secondary settings. Formerly ED 520, students may not receive credit for both.

EDRD 521. Reading in the Elementary School (4). Prerequisites, a basic undergraduate reading course and classroom experience, or permission. Contemporary influences in reading instruction in American elementary schools. Formerly ED 521, students may not receive credit for both.

EDRD 522. Middle School Reading (3). Prerequisites, a basic undergraduate reading course and classroom experience. An advanced course on the teaching of reading designed for middle school teachers. Formerly ED 522, students may not receive credit for both.

EDRD 523. Survey of Research in Reading (3). Prerequisites, reading methods course and teaching experience. Identification and in-depth study of problems related to reading instruction. Recent reading research is pursued with emphasis on classroom application. Formerly ED 523, students may not receive credit for both.

EDRD 525. Psychology of Reading (3). Prerequisites, a reading methods course, a basic psychology of learning course, or permission of instructor. Principles of learning and readiness, perception, psychological and physiological aspects of reading. EDRD 525 and PSY 525 are equivalent courses Formerly ED 525, students may not receive credit for both.

EDRD 526. Diagnosis of Reading Difficulties (3). Prerequisites, an undergraduate reading methods course and teaching experience. Designed to inform practicing teachers about materials and procedures for diagnosing and interpreting reading problems of students. Formerly ED 526, students may not receive credit for both.

EDRD 527. Whole Language Approach to Teaching Reading (3). Oral language development as a bridge to reading. Specific techniques and materials that use the whole language of the child will be developed into a reading program. Formerly ED 527, students may not receive credit for both.

EDRD 528. Remediation of Reading Difficulties (3). Prerequisite, EDRD 526. Techniques and materials for remediating children's reading difficulties. Should be

taken concurrently with EDRD 592. Formerly ED 528, students may not receive credit for both.

EDRD 532. Organization and Administration of Reading Programs (3). Prerequisites, EDRD 528 and 592.1 and permission of the instructor. Designed for administrators, coordinators, consultants, and reading specialists. Program operations, new techniques and materials, grant writing, supervisory skills, and inservice presentations. Student may not receive credit for both ED 524 and EDRD 532. Formerly ED 532, students may not receive credit for both.

EDRD 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDRD 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. Formerly ED 591.

EDRD 592. Practicum: Diagnosis and Remediation of Reading Difficulties (3). Prerequisite, EDRD 526. Supervised experience working with one or more students. Includes the preparation of a case study. Grade will be S or U. Should be taken concurrently with EDRD 528. Formerly ED 592.1, students may not receive credit for both.

EDRD 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 596.

EDRD 597. Graduate Research (1-10). Individual student research under the direction of a faculty member. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree. Formerly ED 597.

EDRD 598. Special Topics (1-6). Formerly ED 598.

EDRD 599. Seminar (1-5). May be repeated. Formerly ED 599.

EDRD 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses in Special Education

EDSE 501. Orientation, Foundations, and Issues (2). Prerequisite, teaching experience or permission of the instructor. Orientation of the graduate student to the Special Education Master's degree program. Current issues in the identification, assessment, instruction, and evaluation of students with disabilities will be explored through readings, discussions, and presentations. Formerly SPED 501, students may not receive credit for both.

EDSE 503. High Prevalence Categories of Exceptionality (3). Prerequisite, EDSE 501 or permission of instructor. Etiology, social issues and management strategies for students with mental retardation, learning disabilities, and behavioral disorders. Formerly SPED 503, students may not receive credit for both.

EDSE 510. Instructional Management Principles (3). Applied Behavior Analysis (ABA) principles will be presented. Their interpretation in a range of research will be presented.

EDSE 512. Educational Rights of Individuals with Disabilities (3). Prerequisite, EDSE 501 or permission of instructor. Designed to prepare graduate students to use legal decisions to assist individuals with disabilities, and their families, in creating an appropriate educational environment. Formerly SPED 512, students may not receive credit for both.

EDSE 521. Functional Assessment (3). Prerequisite, EDSE 501 or permission of the instructor. Current effective assessment processes will be defined, developed, and defended. Included will be goal establishment, rationale for assessment processes utilized, and clarification of administrative procedures. Formerly SPED 521, students may not receive credit for both.

EDSE 522. Collaboration/Consultation (3). Prerequisite, EDSE 521, EDSE 523. Prerequisites, EDSE 501 or permission of instructor. Designed as a reflective process for the teacher to identify specific strengths in the areas of inter/intra personal skills. Formerly SPED 522, students may not receive credit for both.

EDSE 523. Curriculum for Students with Special Needs (3). Prerequisite, EDSE 501, EDSE 521, or permission of instructor. Focuses on selecting and implementing curricular adaptations to facilitate the participation of students with special needs in the regular classroom. Formerly SPED 523, students may not receive credit for both.

EDSE 533. Education of Disadvantaged Students (3). Prerequisite, teaching experience or permission of instructor. Techniques of teaching and curriculum modification for teaching the disadvantaged. Emphasis on early education as a prevention of failure and compensatory education for later grades. Formerly SPED 533, students may not receive credit for both.

EDSE 581. Current Issues in Special Education (1). May be repeated. Graduate standing required. Formerly SPED 581.

EDSE 583. Seminar: Research Special Education (2). Prerequisites, EDF 510 and EDSE 597. Advanced study of an approved special education issue or topic, under the guidance of a professor, including original research. Exchanging results by informal lectures, reports, and discussions. May be repeated for credit under different topics. Formerly SPED 583 A-F.

A. Assessment

B. Instruction

C. Early Intervention

D. Behavior

E. Low Incidence/Severe-Profound

F. Transition

EDSE 585. Administration and Supervision of Programs for Individuals with Disabilities (3). Prerequisites, EDSE 501, teaching experience or permission of instructor. The course will focus on the administrative process of designing, developing, preparing for implementation and evaluating the procedural and substantive safeguards related to administering and supervising programs for individuals with disabilities. Formerly SPED 585, students may not receive credit for both.

EDSE 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly ED 590, students may not receive credit for both.

EDSE 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program. Formerly ED 591.

EDSE 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED, SPED 596.

EDSE 597. Graduate Research in Special Education (4). Prerequisites, EDSE 501, EDSE 503, EDF 510 and permission of instructor. Specialty area research and research report preparation. Formerly

SPED 597, students may not receive credit for both.

EDSE 598. Special Topics (1-6). Formerly ED, SPED 598.

EDSE 599. Seminar (1-5). May be repeated. Formerly ED, SPED 599.

EDSE 682. Internship In Special Education School Administration (4-16). Meets the internship requirements outlined by the State Board of Education for candidates seeking director of special education certification. Permission to register after admittance by the administrator preparation board. Grade will be S or U. Credits earned in an administrative internship will not exceed a total of 16. Not more than 4 credits are applicable to the credit requirements for the Master's degree. Formerly SPED 682, students may not receive credit for both.

EDSE 683. Pre-Autumn Internship in Special Education School Administration (4). Prerequisite, permission of the director of the administrator preparation board. Emphasis is on the responsibilities of special education prior to and during the opening of the school year. Combines with EDSE 682 for 16 total credits in administrative internship. Grade will be S or U. Formerly SPED 683, students may not receive credit for both.

EDSE 684. Internship in Professional Affiliated Disciplines (2-4). Prerequisites, EDSE 501, EDSE 503, EDF 510, permission of graduate committee Chair, and experience with individuals with disabilities. Formerly SPED 684, students may not receive credit for both.

EDSE 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, EDF 510 and permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly ED 700.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs: EDCS 544. Parent-Teacher Conferences; EDCS 571. Continuous Progress School; EDCS 577. inservice Programs.

ENGLISH

Graduate Faculty

Chair: Patsy Callaghan
Language and Literature 423

Professors

Liahna K. Armstrong, American Literature, Popular Culture Film
Patricia Callaghan, Rhetoric, World Literature, English Education
Bobby Cummings, Rhetoric, Teacher Education, Writing on Computers
Philip B. Garrison, Non-fiction Prose, Poetry Writing, World Literature, Mythology, American Literature
Loretta Gray, English as a Second Language
Mark W. Halperin, Poetry Writing, Folk Literature, Modern Poetry
Terry L. Martin, English Education, Women's Literature
Steven Olson, American Literature
Joseph Powell, Creative Writing, Modern Poetry
Gerald J. Stacy, English Renaissance Literature
Christine A. Sutfin, Victorian Literature, English Novel, Women's Literature

Associate Professors

Toni Culjak, World and Multicultural Literature
Paulus Pimomo, British Literature, Post-Colonial Studies
Charles Xingzhong Li, Linguistics, TESOL, Linguistic Approaches to Literature

Assistant Professors

Laila Abdalla, English Medieval and Renaissance Literature
George Drake, 18th Century and Romantic British Literature, English Novel

Emeritus Professors

Robert M. Benton, American Literature
John L. Vifian, Eighteenth-century Literature, English Novel

General Departmental Information

The Department offers two options for the Master of Arts degree: Master of Arts, English (Literature) and Master of Arts, English (TESL/TEFL—Teaching English as a Second Language/Teaching English as a Foreign Language).

Master of Arts

English (Literature)

The M.A. in literature offers a rigorous, individualized program of advanced study of literature written in English. Students choose from an array of courses and select a thesis or non-thesis option. Although allowed flexibility in their course of study,

students are also required to pass an examination over a select number of literary works widely recognized in the field of English. Students enter our program for a variety of reasons: to further their understanding of literature, to strengthen their teaching qualifications, or to prepare for doctoral work.

General Requirements of the Program.

Students who decide to write a thesis take a minimum of 45 credits; those who choose the non-thesis option, a minimum of 47 credits. Students in both options must take ENG 512: Introduction to English Graduate Study and ENG 518: Advanced Literary and Critical Theory. Regardless of which option is chosen, at least 30 credits must be at the graduate level in English, and at least 20 credits will be in literature in the English department. Up to 10 credits may be taken in approved courses offered outside of the English department. All degree candidates must pass a written comprehensive examination over works on a standard reading list.

Thesis or Non-Thesis Option. A student who chooses the thesis option takes 6 thesis credits (ENG 700), writes a thesis which fulfills the requirements of the student's thesis committee, and takes an oral examination over the thesis. A student selecting the non-thesis option takes 8 graduate credits in English instead of the 6 thesis credits and has a research paper accepted by a committee of graduate faculty.

Final Examination. All students must pass a written Master's comprehensive examination over the department's approved reading list.

Master of Arts

English (Teaching English as a Second Language / Teaching English as a Foreign Language - TESL/TEFL)

The TESL/TEFL program fosters the awareness, understanding, and skills necessary for effective teaching of English as a second or foreign language. It prepares educators to work with adult language learners both in the United States and abroad by study in the three general areas of language, pedagogy, and culture. Graduates from this program would be qualified to work in American colleges and universities, private ESL institutes, and programs and schools abroad that provide instruction in English. Those students who are already certified to teach in Washington public schools may also receive endorsement in ESL, with some additional work.

General Requirements of the Program

In addition to the requirements listed below, requisites to completion of the

program include the following: an introductory linguistics course, a course in methods and materials of teaching a foreign or second language, and high-intermediate proficiency in a foreign language. Students can be admitted to the program without this background, but they will be required to gain this background while enrolled in the program.

The program consists of 55 credits, as outlined below, and offers both a thesis and a non-thesis option.

Thesis or Non-Thesis Option

The thesis option requires candidates to write a thesis and sit for a one-hour oral examination over the thesis. If the non-thesis option is selected, the student's educational achievement will be formally assessed at the end of the program by means of a portfolio; the materials included in the portfolio are derived from the student's engagement with works on a reading list. The contents of the portfolio and the reading list will be developed in consultation with the student's committee. The reading list will be equivalent to about 24 book-length studies. In addition, students choosing the non-thesis option who have English literature majors will take six credits in language or linguistics courses while candidates with majors other than English literature will take six credits in literature courses.

Required Courses	Credits
ENG 512, Introduction to English Graduate Study.....	5
Language	
ENG 586, Advanced Grammar.....	4
ENG 516, Advanced Studies in English Language: Phonetics and Phonology.....	4
ENG 599, Seminar: Language in Society...	4
ENG 599, Seminar: TESL/TEFL.....	4
Pedagogy	
ENG 516, Advanced Studies in English Language: Second Language Acquisition.....	4
ENG 531, TESL/TEFL Methods and Materials.....	4
ENG 592, Practicum.....	4
Department-approved Electives.....	16
Electives in language, thought, or culture by advisement.	
One course in literature required.	
Thesis or Non-Thesis Option	
ENG 700, Thesis OR Approved courses...	6

Total 55

Graduate Courses in English

ENG 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

ENG 510. Practical Application in Composition (2). Prerequisite, permission of instructor. The study and practice of the teaching of composition. Associated classroom experience as a teaching assistant or other experience as approved by the Department. May be repeated. Does not count toward the M.A. degree. Grade will be S or U.

ENG 512. Introduction to English Graduate Study (5). The philosophy of literature; research methods. Required of all Master of Arts candidates.

ENG 513. Teaching English Composition (4). Focuses on research, theories, and practical issues relevant to the teaching of composition.

ENG 514. Advanced Studies in English Literature (4). Prerequisite ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 515. Advanced Studies in American Literature (4). Prerequisite ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 516. Advanced Studies in English Language (4). Prerequisite, ENG 512. Course content identified by title in the university class schedule. May be repeated for credit under different titles.

ENG 517. Advanced Studies in Major World Writers (4). Prerequisite, ENG 512. Specific course content identified by title in the University Class Schedule. May be repeated for credit under different titles.

ENG 518. Advanced Literary and Critical Theory (4). Prerequisite, ENG 512. Advanced study of the theory and practice of various critical perspectives and strategies as they inform the study of literary texts.

ENG 531. TESL/TEFL Methods and Materials (4). Research in language, language acquisition and second language learning; selected approaches to teaching listening, speaking, reading and writing of English to non-native-speaking adult learners.

ENG 581. CWWP I: Writing Pedagogy (8). Prerequisite, permission of CWWP Director. Summer course in which K-12 teachers learn to implement writing and language arts across the curriculum and prepare to lead teacher inservice workshops. Participants must register concurrently for ENG 582.

ENG 582. CWWP II: Applied Writing Research (4). Prerequisite, permission of CWWP Director. CWWP follow-up course in which teachers design, implement, document and present the results of classroom-based research projects. Participants must register concurrently for ENG 581.

ENG 586. Advanced Grammar (4). English syntax, especially modern grammar and their role in teaching basic reading and writing.

ENG 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied towards a Master's degree.

ENG 592. Practicum (1-5). Supervised field experience in literacy education or teaching English as a second language/foreign language. May be repeated with consent of instructor. Grade will be S or U.

ENG 595. Graduate Research (2-10). Prerequisite, ENG 512 and permission of Department Chair. For students doing advanced research, writing, and study. Students using faculty time and departmental resources for thesis work must be registered for ENG 595 or 700. May be repeated for credit. May not be included in the Course of Study for the Master's degree. Grade will be S or U.

ENG 596. Individual Study (1-6). Prerequisite, permission of instructor.

ENG 598. Special Topics (1-6).

ENG 599. Seminar (1-5). Course content identified by title in the university Class Schedule. ENG 599 and ENG 499 are equivalent courses. May be repeated for credit under different titles.

ENG 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

FAMILY AND CONSUMER SCIENCES

Graduate Faculty

Chair: Jan Bowers
Michaelsen 100

Professors

Ethan A. Bergman, Food Science and Nutrition
Jan Bowers, Family and Consumer Sciences Education
David L. Gee, Food Science and Nutrition
Carolyn Schactler, Apparel Design

Associate Professors

Joan Amby, Family Studies
Marla Wyatt, Family and Consumer Sciences Education

Assistant Professors

Nancy Buerger, Food Science and Nutrition
Vicki Shaffer-White, Fashion Merchandising

General Departmental Information

The graduate program in family and consumer sciences is flexible and facilitates advanced study in apparel design, family studies, nutrition, and family and consumer sciences education. Application to graduate study is made through the Office of Admissions. Interested students are urged to contact the Department Chair for information and guidance.

Master of Science

Family and Consumer Sciences

Program Coordinator:

Jan Bowers
Michaelsen 100

Purpose. The purpose of this program is to provide an opportunity for students to concentrate at the Master's level in one or more of the subject areas related to family and consumer sciences. The goal of the program is to prepare persons for further graduate study; for public school or college teaching; as specialists in nutrition, welfare, or other service agencies; or as professionals in, or consultants to, business, industry, and government.

Program. In consultation with a faculty advisor, and with the approval of the Department Chair, students may develop a program of courses in one of three specializations. Each student will complete a set of core courses plus coursework specific for each specialization. The three specializations include family studies, nutrition, and family and consumer sciences education. All candidates shall complete at least 45 credits as outlined in an approved Course of Study

filed with the Office of Graduate Studies and Research. The student's advisor and graduate committee, comprised of at least three faculty, will assist in the development of the program. With approval by the Department Chair and the Committee Chair, faculty can be selected from another department.

It is expected that six thesis credits, based upon an independent research project, will be included in the student's program.

Admission Requirements. Students applying to the Nutrition Specialization are required to submit Graduate Record Examination (GRE) results with their application.

Core Courses. The following core of courses will be included in all programs:

Required Courses	Credits
Department-Approved Statistics courses*	3-4
Department-Approved Research Design course**	3-4
FCSG 700, Master's Thesis	6
FCSG 599, Seminar	1

Total Core Credits 13-15

*Recommended statistics courses include:

HHPR 556, Statistical Applications in PE, Health, and Leisure (3)
EDF 504, Advanced Educational Statistics (4)

**Recommended research Design courses include:

HHPR 557, Research Methods (3)
EDF 510, Educational Research and Development (3)
PSY 555, Design and Analysis for Applied Research (4)

Nutrition Specialization

Required Courses	Credits
FCSN 540, Nutrition Education	3
FCSN 541, Applications in Dietetics	5
FCSN 543, Advanced Nutrition and Biochemistry	3
FCSN 545, Advanced Studies in Developmental Nutrition	4
FCSN 547, Nutrition Update	3
Approved Electives	12-13
Core Credits	13-15

Total 45

Family and Consumer Sciences Education Specialization

Required Courses	Credits
FCSE 520, Supervision in Vocational Family and Consumer Science Education	3
FCSE 521, Curriculum Development in Family and Consumer Science Education	3
FCSE 522, Survey of Research in Family and Consumer Sciences Education	3

OCED 561, Administration of Occupational Education	3
Approved Electives	18-19
Core Credits	13-15

Total 45

Graduate Courses in Family and Consumer Sciences Education

FCSE 512. Transition to Family and Consumer Sciences Education (4).

Familiarize students with FCS discipline and provides resources and information for achieving Family and Consumer Sciences teacher licensure. Grade will be Sor U.

FCSE 520. Supervision in Vocational Family and Consumer Sciences Education (3).

Explore recent trends and issues in home economics education; identify and analyze professional competencies for beginning home and family life teachers and explore strategies for helping student teachers to develop needed competencies.

FCSE 521. Curriculum Development in Family and Consumer Sciences Education (3).

Employ steps of curriculum development in total home economics programs or in a specific area and allows teachers and administrators to plan for program needs in the school or school district.

FCSE 522. Survey of Research in Family and Consumer Science Education (3).

Current issues and historical perspective in vocational home and family life education to serve as a basis for curriculum change, program development and professional growth.

Graduate Courses in Family Studies

FCSF 531. Conceptual Frameworks in Family Analysis (3).

Sociological, psychological and developmental theories relating to study of family patterns and practices.

FCSF 532. Family Interaction (4).

Prerequisite, 8 credits of upper division coursework in family studies or the behavioral sciences. Analysis of relevant literature associated with establishing and maintaining interpersonal and family relationships.

FCSF 536. Parent Education (4).

Principles, methods and materials for parent education with special attention given to program development, implementation, and evaluation.

Graduate Courses in Food and Nutrition

- FCSN 540. Nutrition Education (3).** Principles and procedures in nutrition education for public and private agencies. Program and curriculum planning and evaluation. Emphasis on current research in the field.
- FCSN 541. Applications in Dietetics (5).** Concepts in clinical and community nutrition as well as food service management and administration. Interviewing and communication; assessing clients for nutritional risk; production and procurement practices; management functions and computer and research applications.
- FCSN 543. Advanced Nutritional Biochemistry (3).** Prerequisite, FCSN 443. Advanced study of the effects of macro- and micro-nutrients on human metabolism.
- FCSN 545. Advanced Studies in Developmental Nutrition (4).** Prerequisite, FCSN 345 or equivalent. Review of effects of nutrition on growth and development. Nutritional assessment and evaluation of individuals and programs. Current issues in nutrition policies and programs with emphasis on early childhood.
- FCSN 547. Nutrition Update (3).** Prerequisite, FCSN 245 or permission. Recent advances in nutrition research. Advanced study of selected nutrition problems. With permission, may repeat every other year.

Graduate Courses in Clothing and Textiles

- FCSA 550. Advanced Apparel Techniques (3).** Permission of instructor. Six hours laboratory per week.
- FCSA 553. Advanced Studies in Garment Fabrication with Designer Fabrics (4).** Prerequisites, FCSA 388, 484 or permission. Analysis of fabric content and structure as it relates to fabric behavioral characteristics. Application of theory to construction problems.
- FCSA 554. Men's Tailoring (3).** Prerequisite, permission of instructor. Custom tailoring techniques specifically designed for the construction of a man's suit. This will include trousers, vest and lined suit coat. Six hours laboratory per week.

Graduate Courses in Housing and Interiors

- FCSH 565. History of Housing and Furnishing (3).**
- FCSH 566. Advanced Home Furnishing (5).** Two hours lecture and six hours laboratory per week.

Graduate Courses in Family and Consumer Sciences

- FCSG 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.
- FCSG 509. Service Learning (3).** Student will use program of study content knowledge to improve a community situation. FCSG 509 and EDCS 509 are equivalent courses. May be repeated for credit.
- FCSG 595. Graduate Research (1-10).** Prerequisite, permission of major advisor. Development and investigation of an approved laboratory or field research problem. May be repeated. Maximum of 6 credits may be included in Course of Study for the Master's degree. Grade will be S or U.
- FCSG 596. Individual Study (1-6).** May be repeated.
- FCSG 598. Special Topics (1-6).**
- FCSG 599. Seminar (1-5).** May be repeated.
- FCSG 700. Master's Thesis, Project Study and/or Examination (1-6).** Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be S or U. May be repeated for up to 6 credits.

Graduate Courses/Programs on Reserve

- Master of Science, Apparel Design Specialization; Master of Science, Family Studies Specialization.
- FCSF 531. Conceptual Frameworks in Family Analysis (3); FCSF 532. Family Interaction (4); FCSF 536. Parent Education (4); FCSN 542. Nutritional Epidemiology (3).**

FOREIGN LANGUAGES

Graduate Faculty
Chair: Joshua Nelson
 Language and Literature Building 102

Professor
 Rosco N. Tolman, Spanish

General Departmental Information

The Foreign Languages Department does not offer any graduate degrees.

Graduate Courses in Foreign Languages

- FNLA 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.
- SPAN 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

GEOGRAPHY AND LAND STUDIES

Graduate Faculty
Chair: Morris L. Uebelacker
 Lind 119

Professors
 John A. Alwin, Human Geography, Environment and Behavior, Pacific Rim Resources, Western North America
 James L. Huckabay, Energy Resources, Biogeography, Air Photo Interpretation
 Nancy Hultquist, GIS, Economic, Urban, Automated Cartography
 Morris L. Uebelacker, Human Geography, Field Methods, Planning, Air Photo Interpretation, Yakima River Basin

Associate Professors
 Anthony Gabriel, Biogeography, Environmental Studies, Coastal Zone Management, Pacific Northwest
 Robert Hickey, GIS, Remote Sensing, Environmental Impacts, Coastal Zones, Australia
 Robert Kuhlken, Cultural Ecology, Environmental Planning, Oceania, Historical Geography
 Karl Lillquist, Physical Geography, Soils, Air Photo Interpretation, Field Methods
Assistant Professor
 *Christopher Kent, Physical Geography, Water Resources, Watershed Planning, North America
 *Associate Graduate Faculty

General Departmental Information

Geography and Land Studies jointly coordinates the Master of Science degree program in Resource Management with the Department of Anthropology. For further information see Resource Management.

Graduate Courses in Geography

GEOG 596. Individual Study (1-6). Prerequisite, permission of Department Chair.

GEOG 599. Seminar (1-5). May be repeated.

GEOLOGICAL SCIENCES**Graduate Faculty**

Chair: Lisa L. Ely
Lind 220

Professors

Lisa L. Ely, Geomorphology, Paleohydrology, Quaternary Geology, and Climate Change

M. Meghan Miller, Crustal deformation, Active Tectonics, GPS, Geodesy, Remote Sensing

Charles M. Rubin, Paleoseismology, Earthquake Hazards, Active Tectonics

Associate Professors

Wendy A. Bohrsen, Volcanology, Isotope Geochemistry, Igneous Petrology

Carey Gazis, Environmental Geochemistry, Stable Isotope Geochemistry, Hydrogeology

Jeffrey Lee, Active and Regional Tectonics, Structural Geology

Assistant Professors

Timothy I. Melbourne, Seismology, Continental Dynamics

Adjunct Lecturers

Marie Ferland, Marine Stratigraphy, Quaternary Geology and Climate Change, Sedimentology

Steven Lundblad, Sedimentary Geology, Isotope Geochemistry

Jack Powell, Field Geology, Mineral Resources, Pacific Northwest Geology

Nick Zentner, Scientific Instructional Technician Supervisor

Emeritus Professors

Robert Bentley, Structural Geology, Igneous and Metamorphic Petrology, Regional Geography of the Pacific Northwest

James R. Hinthorne, Mineralogy, Geochemistry, Spatial Information Systems

Master of Science**Geology**

Program Objectives and Description: The graduate program in the Geological Sciences is designed to prepare students for professional employment in geoscience careers in industry, consulting firms, local, state, or

federal government, teaching at the community college or secondary level, and serves as a foundation for graduate studies beyond the M.S. level. It is also suitable training for careers in environmental law and natural resource and hazard planning. The Department encourages an integrative, multi-disciplinary approach.

Admission Requirements: Incoming students are expected to meet the requirements of the Graduate School, have a solid background in science and mathematics, and show evidence of superior scholarship. All students entering the M.S. program are expected to have a background equivalent to that required for the Bachelor of Science degree in Geology at CWU and to have completed a geological field camp for college credit. Applicants must provide Graduate Record Examination (GRE) scores for the general test. Graduates in chemistry, physics, engineering, biology, or other technical disciplines are also encouraged to apply. Deficiencies in the student's undergraduate training as determined by the Department of Geology at the time of matriculation must be removed without graduate credit during the first year of graduate study. If English is a secondary language, students must score 550 or above on the TOEFL examination.

Application Deadlines and Supporting Materials: Applications and all supporting materials are due by February 1 for fall quarter entrance. Applications will include a statement of your background and purpose, official transcripts, general Graduate Record Examination scores, and three letters of recommendation.

Program Requirements: The Department offers an M.S. degree that requires a minimum of 60 credits of graduate study. Fifty-four credits are earned from coursework and research (35 credits at the 500 level or above) and six credits are allowed for thesis (GEOL 700). All graduate students must register for GEOL 501, Current Topics in Geology, during the fall quarter of their first year, GEOL 502, Regional Geology of the Pacific Northwest, and GEOL 503, Introductory Graduate Research Methods. GEOL 504, Graduate Seminar Series, is required during the first 6 quarters of a student's graduate program. Candidates must pass a final oral examination on their thesis project and supporting coursework, given by a thesis committee consisting of the Thesis Advisor and two other faculty. Normal completion of the Master of Science requires two academic years and an intervening summer of field study. Students may be encouraged to begin field work prior to matriculation.

Areas and Electives in Specialization: Course requirements are tailored to the individual student's academic background,

professional goals, and research interests through advising from the graduate faculty and thesis committee chair. The greatest departmental strengths are in active and regional tectonics, seismology, geodesy, geomorphology and Quaternary geology, paleohydrology, environmental geochemistry, and volcanology. The Department is a participating member of the Southern California Earthquake Center, a NSF-sponsored Science and Technology Center. The department houses the data analysis center for PANGA, a network of continuously operating GPS receivers distributed throughout the Pacific Northwest in the United States and Canada. In addition, the Department has strong ties with the Jet Propulsion Laboratory (JPL), administered by Caltech for NASA; the opportunity to participate in JPL programs is a unique feature of the geology program at Central. The department is a participating member of the WinSAR consortium and IRIS.

Central Washington University lies on the Columbia River Basalt plateau, adjacent to the crystalline core and majestic volcanoes of the Cascade Mountains. Seismicity and active volcanism of the Cascadia subduction zone, highly deformed rocks of northern Washington and British Columbia, and a water- and natural-resource based economy in central Washington provide ideal opportunities to study a wide variety of geologic problems.

Equipment and Computer Facilities: The Department of Geological Sciences has excellent research computer facilities. We currently support numerous Sun Microsystems workstations and servers. ERMMapper, PCIworks, MatLab, Islandworks, and Arcinfo/Arcview are available for image processing and analyzing remotely sensed images and DEMs. In addition, the department has access to the Spatial Information Systems Laboratory.

The Geodesy Laboratory houses the data processing center for the Pacific Northwest Geodetic Array (PANGA). The laboratory analyzes continuous data from the permanent GPS array in the Pacific Northwest. The Geodesy Laboratory has a pool of Trimble SSI and 4700 receivers for geodetic experiments.

The department is equipped with digital surveying equipment (Leica Total Stations and Trimble kinematic GPS) and recently acquired ground penetrating radar equipment. The department has Nikon and Leica petrographic microscopes, research polarizing reflected and transmitting light microscopes, with CCD-video camera displays.

The department is currently expanding its geochemistry facilities. With National Science Foundation support, the department

has acquired sample preparation facilities, a geochemistry laboratory with an ICP-MS and stable-isotope mass spectrometer, and an automated Philips PW 3400 Powder X-Ray Diffractometer. Laboratories include a stable isotope laboratory, equipped with a general purpose extraction line for analysis of waters, carbonates, and soils and a modern geochemistry laboratory, equipped for isotonic, major-element, and trace-element analysis of earth materials.

Graduate Committee: The student must have a three-member graduate committee, selected in consultation with the advisor; two members must be from the Department of Geology.

Examination: Candidates must pass a final examination on their thesis and course work.

Required Courses	Credits
GEOL 501, Current Topics in Geology 3	
GEOL 502, Regional Field Geology of the Pacific Northwest 2	
GEOL 503, Introductory Graduate Research Methods 3	
GEOL 504, Graduate Research Seminar . . . 6	
Subtotal 14	
Electives and Seminars (to be selected by advisement) 25-31	
GEOL 595, Graduate Research 9-15	
GEOL 700, Thesis 6	
Total	60

Graduate Courses in Geology

- GEOL 501. Current Topics in Geology (3).** Course will introduce beginning graduate students to current research topics in a variety of subdisciplines in geology through readings, discussions and student presentations.
- GEOL 502. Regional Field Geology of the Pacific Northwest (2).** Field studies in the Pacific Northwestern United States and Canada.
- GEOL 503. Introductory Graduate Research Methods (3).** Prerequisites, GEOL 501 and 502, or permission of instructor. Discussion and exploration of research methods in geology, including library and Internet resources, thesis project selection and design, and literature review. Three hours per week.
- GEOL 504. Graduate Seminar Series (1).** Research seminar series comprising the Geological Sciences weekly seminar series. Includes discussion with speaker following seminar. May be repeated for a total of 12 credits. Grade will be either S or U.
- GEOL 515. Earthquake Geology and Neotectonics (5).** Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB, and

permission of instructor. Geomorphology, stratigraphy, and structural geology applied to the study of active faults and folds in a variety of tectonic settings. Relation of seismicity and geodetic measurements to geologic structure and active tectonic processes. Three hours of lecture per week and four hours of laboratory per week. GEOL 515 and GEOL 415 are equivalent courses. Students may not receive credit for both.

GEOL 520. Tectonic Evolution of Western North America (4). Prerequisite, GEOL 101 or GEOL 102 and GEOL 101LAB, GEOL 200, and GEOL 360. Overview of the tectonic, structural, and stratigraphic evolution of western North America Cordillera, from the Proterozoic to the present day. Four lectures per week. GEOL 520 and GEOL 420 are equivalent courses. Students may not receive credit for both.

GEOL 525. Environmental Geochemistry (5). Prerequisite, CHEM 181, CHEM 181LAB, CHEM 182 and CHEM 182LAB, or permission of instructor. Global geochemical cycles, influences of rocks and soils on water chemistry, behavior of isotopes and trace elements. Includes class project studying local environmental geochemistry topic. Three lectures plus one 3-hour lab per week. GEOL 525 and GEOL 425 are equivalent courses. Students may not receive credit for both.

GEOL 530. Remote Sensing (5). Prerequisites, GEOG 410 or GEOL 210, or permission of instructor. Principles of acquisition, analysis, and use of remotely sensed data (LANDSAT, SPOT, Ikonos, etc.). Applied experience using image processing software. Three hours lecture and three hours laboratory per week. GEOG 530, GEOL 430 and GEOG 430 are equivalent courses. Students may not receive credit for more than one course.

GEOL 532. Field Geodetic Techniques (3). Training in field geodetic techniques, including scientific application of two or more precision surveying instruments: geodetic GPS, differential GPS, and electronic distance meter. Three hours a week and field project, or one-week field course. GEOL 532 and GEOL 432 are equivalent courses. Students may not receive credit for both.

GEOL 540. Sedimentary Basins (4). Prerequisite, GEOL 370. Study of clastic and carbonate depositional systems and sedimentary environments in the context of regional tectonic and oceanographic setting. Four hours lecture per week.

GEOL 545. Hydrogeology (5). Prerequisites, GEOL 101 or GEOL 102 and GEOL 101LAB and MATH 154, or permission of instructor. Study of the occurrence and

movement of ground water using geology, hydrology and geochemistry, with an emphasis on practical problems in water management. Three hours lecture and three hours laboratory per week. GEOL 545 and GEOL 445 are equivalent courses. Students may not receive credit for both.

GEOL 553. Seismology (5). Prerequisites MATH 173 or permission of instructor. Elasticity theory, the wave equation, ray theory, diffraction, waveform modeling, travel time inversion. Data analysis. Three hours lecture per week plus 4 hours of scientific computing lab. Offered alternate years. GEOL 553 and GEOL 453 are equivalent courses. Students may not receive credit for both.

GEOL 554. Introduction to Scientific Computing (5). Introduction to numerical computation and simulation of problems relevant to Earth science. Three hours of lecture and three hours of lab. No prior Unix experience necessary. GEOL 554 and GEOL 454 are equivalent courses. Students may not receive credit for both.

GEOL 555. Applied Geophysics (4). Prerequisites, MATH 172 and PHYS 181. Background, principles, and techniques of geophysics as applied to geologic, environmental, and exploration problems. Three hours lecture plus two hours of laboratory or field work per week. required field trips. GEOL 555 and GEOL 455 are equivalent courses. Students may not receive credit for both.

GEOL 561. Advanced Structural Geology (4). Prerequisites; GEOL 360 and permission of instructor. Concepts and theory of rock deformation with application to structural geology, rock mechanics, and tectonophysics. Four lectures per week.

GEOL 565. Tectonic Evolution of Orogenic Belts (2). Overview of the tectonic, structural, stratigraphic, and geophysical evolution of orogenic belts. Two hours of discussion and student presentation per week. May be repeated once for credit.

GEOL 570. Fluvial Geomorphology (4). Prerequisite, GEOL 386. Advanced course covering hydrologic and geomorphic processes in rivers. Exploration of current geomorphic research, practical experience in field techniques and geomorphic models.

GEOL 574. Quaternary Geology (4). Prerequisite, GEOL 386 or permission of instructor. Study of geological processes affecting Earth's most recent history. Course emphasizes global Quaternary environmental change, glacial epochs, paleoclimatic methods, and dating techniques. GEOL 574 and GEOL 474 are equivalent courses. Students may not receive credit for both.

GEOL 575. Petrography and Petrogenesis (5). Prerequisites, consent of instructor. Petrogenetic, hand specimen and thin section study of igneous, metamorphic or sedimentary rocks. Three hours lecture and four hours laboratory or field work per week plus required field trips. GEOL 575 and GEOL 475 are equivalent courses. Students may not receive credit for both. Offered in alternate years.

GEOL 576. Sedimentary Petrography (5). Prerequisite, GEOL 200 and GEOL 346. Analysis and interpretation of depositional systems. Study of classic and carbonate rocks in hand sample, thin section, and in the field. Three hours lecture and 4 hours laboratory per week. GEOL 576 and GEOL 476 are equivalent courses. Students may not receive credit for both. Offered in alternate years.

GEOL 578. Volcanology (5). Prerequisite, permission of instructor. Study of volcanoes and associated deposits, styles of eruption, physical and chemical controls on eruption mechanisms and volcanic hazards and hazard mitigation. Three hours lecture and four hours laboratory per week plus required field trips. GEOL 578 and GEOL 478 are equivalent courses. Students may not receive credit for both. Offered in alternate years.

GEOL 581. Advanced Mineralogy (4). Prerequisites, GEOL 346 and CHEM 182, or permission of instructor. Crystal chemistry of rock-forming minerals. Theory and practice of determinative techniques such as the polarizing microscope, X-ray diffraction, and electron microprobe. Three hours lecture and three hours lab per week. Offered in alternate years. GEOL 581 and GEOL 481 are equivalent courses. Students may not receive credit for both. Offered in alternate years.

GEOL 583. Isotopes as Tracers of Geological Processes (5). Prerequisites CHEM 182, CHEM 182L and MATH 154 or permission of instructor. Covers principles of isotope geochemistry and applications to studies of geological processes such as hydrologic cycling, volcanic petrogenesis and climate change. Three hours lecture per week plus required laboratory work and field trips. GEOL 583 and GEOL 483 are equivalent courses. Students may not receive credit for both. Offered in alternate years.

GEOL 594. Application in GIS (2-4). Prerequisite, permission of instructor. Basic principles and practice with Geographic Information Systems technology including data formats, database acquisition and import, map layer analysis and map output as applied to geologic topics.

Individual project required. One hour lecture and two hours lab per week for each two credits. May be repeated up to a total of six credits with different project focus. Formerly GEOL 592.

GEOL 595. Graduate Research (1-10). Prerequisite, permission of instructor. May be repeated for credit.

GEOL 596. Individual Study (1-5). Prerequisite, permission of instructor. May be repeated for credit.

GEOL 598. Special Topics (1-6). Prerequisite, permission of instructor. May be repeated for credit under separate title.

GEOL 599. Seminar (1-5). Prerequisite, permission of instructor. May be repeated for credit under a separate title.

GEOL 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

HEALTH, HUMAN PERFORMANCE AND RECREATION

Graduate Faculty

Chair: Robert W. McGowan

Professors

Leo D'Acquisto, Exercise Science
 Stephen Jefferies, Physical Education-Pedagogy
 Andrew Jenkins, Health Education
 Robert McGowan, Exercise Science, Sport Psychology
 Vincent M. Nethery, Exercise Science

Associate Professors

Melody Madlem, Health Education-Community Health Education
 Barbara Masberg, Leisure Services-Tourism
 Kirk E. Mathias, Physical Education, Pedagogy

Assistant Professors

Tim Burnham, Exercise Science
 Harry Papadopoulos, Exercise Science

Master of Science Health, Human Performance and Recreation

Master of Science Exercise Director:
 Leo J. D'Acquisto
 PE 104

A Master of Science degree is offered in Health, Human Performance and Recreation (HHPR). In addition to general university requirements for admission to the graduate school, full admission to the graduate program in HHPR requires an undergraduate degree with a major in the student's desired area of graduate study. A specialization in Physical Education Teaching is available through on-line studies.

The Master of Science degree in Exercise Science prepares students for careers in higher education, clinical settings, corporate and community fitness/wellness centers, and athletic development programs. In addition, the curriculum prepares individuals for further study at the doctoral level. Prospective students wishing to pursue a Master of Science in Exercise Science must fulfill the general university requirements for admission to the graduate school and hold an undergraduate degree in exercise science or a closely related area of study.

Conditional or probationary admission may be granted to applicants not meeting all of the admissions criteria.

The student shall complete at least forty-five (45) credits as outlined in an approved Course of Study filed with the Office of Graduate Studies and Research. The Course of Study is structured in consultation with the student's academic advisor, and is approved by the graduate program director and department. It will include a required core of sixteen (16) credits, and appropriate courses depending on the student's program (MS HHPR, MS Exercise Science). Additionally, no undergraduate courses will count toward the completion of the Master of Science degree nor be included on the official course of study. Further, no more than two workshop courses with a maximum of 6 credits, three individual studies with a maximum of 9 credits, or one internship with a maximum of 6 credits can be included on the Course of Study.

Required Courses	Credits
HHPR 510, Issues in Health, Human performance and Recreation.	3
HHPR 556, Statistical Applications in Health, Human Performance and Recreation . . .	4
*HHPR 557, Research Methods	3
HHPR 700, Thesis, Project, Examination. . .	6
Electives (HHPR, EXSC, PE)	14-24
Electives in related disciplines.	5-18
Total	45

*HHPR 556, Statistical Applications in Health, Human Performance and Recreation (or approved equivalent) required prior to enrolling in HHPR 557.

Exercise Science Courses

EXSC 548. Advanced Athletic Training (3). Prerequisite, EXSC 348 or permission of instructor. Identification and analysis of problems. Designed for practicing coaches.

EXSC 551. Advanced Physiology of Exercise I: Metabolism and Skeletal Muscle (3). Prerequisite, PE 450. Application of physiological principles to the regulation of cellular and organic processes during exercise. Regulation, control and adaptation of metabolic pathways. Response and adaptation of skeletal muscle to both acute and chronic exercise. Formerly PE 551. Students may not receive credit for both.

EXSC 552. Advanced Physiology of Exercise II: Pulmonary and Cardiovascular Systems (3). Prerequisite, EXSC 551. Responses and adaptations of cardiovascular and pulmonary systems to acute and chronic exercise. Neural and humoral mechanisms of control during exercise. Formerly PE 552. Students may not receive credit for both.

EXSC 553. Laboratory Techniques in Stress Physiology (5). Prerequisites, EXSC 551 and EXSC 552 or permission of instructor. Techniques for the assessment of human physiological characteristics during rest and exercise stress. Two hours lecture and two hours lab per week. Formerly PE 553. Students may not receive credit for both.

EXSC 554. Perceived Exertion and Exercise (3). Prerequisites, EXSC 551, EXSC 552 or permission of instructor. Physiological and psychological bases for perceived exertion during exercise. Influence of training on perceived exertion. Formerly PE 554. Students may not receive credit for both.

EXSC 555. Environmental Stress and Human Performance (3). Prerequisites, EXSC 551, EXSC 552 or permission of instructor. Influence of a variety of environmental factors on human performance. Adaptations to environmental stressors through constant exposure. Formerly PE 555. Students may not receive credit for both.

EXSC 556. Ergogenic Aids and Human Performance (3). Prerequisites, EXSC 551, EXSC 552 or permission of instructor. Use of physical, physiological, pharmacological and psychological aids to improve human performance. Formerly PE 556. Students may not receive credit for both.

EXSC 559. Applied Kinesiology (3). Prerequisite, EXSC 356. Advanced kinesiological analysis of exercise programs, sport skills and skills for daily living. Formerly PE 559. Students may not receive credit for both.

EXSC 562. Clinical Exercise Physiology (3). Prerequisites: EXSC 551 or 552 or by permission of the instructor. This course

introduces students to exercise principles and applications as they relate to individuals with chronic diseases and disabilities. Formerly PE 562. Students may not receive credit for both.

EXSC 563. Clinical Exercise Testing and Prescription (4). Prerequisites: EXSC 562. The purpose of this course is to introduce students to applications of clinical testing and prescription for high risk populations. Formerly PE 563. Students may not receive credit for both.

Graduate Courses in Health Education

HED 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

HED 510. Substance Abuse and Teens: Education and Intervention (3). Analysis of substance abuse among teenagers. Emphasis is placed on identification and intervention processes.

HED 511. Principles of Administration, Ethics, and Professionalism in Addictionology (3). Course will focus on organizational design, management and personnel policy of organizational cultures, also ethically sound attitudes and behaviors related to the profession will be discussed.

HED 512. Advanced Prevention Program Development (3). A study of prevention theories and practices for reducing the harmful effects of addictions.

HED 513. History and Context of Addictive Disorders (3). This course addresses the historical, social, cultural trends and epidemiology of addictive disorders among all populations.

HED 514. Neural Chemical Basis of Addictive Behaviors (3). This course addresses the phenomena of various addictive processes and their relationship with the central nervous system.

HED 515. Survey of Addictions I (3). The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on substance abuse and eating disorders.

HED 516. Survey of Addiction II (3). The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on chemically addicted, mentally impaired (CAMI) and mentally impaired chemical abuses (MICA).

HED 517. Survey of Addiction III (3). The study of theoretical, empirical and clinical frameworks from various perspectives and disciplines focusing on sexual addiction,

gambling addiction and related obsessive-compulsive disorders.

HED 518. Public Policy in Addictions (3). The course focuses on how public and private entities influence legislative, economic and societal responses to addictions from a systems perspective.

HED 519. Addictionology and the Family (3). A systematic perspective of family dynamics, as it relates to various forms of addictions, treatment and recovery.

HED 590. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U.

HED 591. Workshop (1-6).

HED 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

HED 598. Special Topics (1-6).

HED 599. Seminar (1-5). May be repeated for credit under different titles.

Graduate Courses in Health, Human Performance and Recreation

HHPR 510. Issues in Health, Human Performance and Recreation (3) Formerly PEHL 510.

HHPR 551. Physical activity for Wellbeing: Role in the Physical Education Curriculum (3). Identification of fitness components that relate to wellness. Rationale for incorporating the wellness concept as the basis for physical education. Formerly PEHL 551.

HHPR 552. Gross Human Anatomy: Cadaver Dissection (1). Gross anatomy dissection of cadaver. One lab session weekly. Can be repeated for up to two credits during the same quarter. Formerly PEHL 552.

HHPR 556. Statistical Applications in Health, Human Performance and Recreation (4). Application of statistics to research in physical education, health, and leisure. Analysis of data sets drawn from research in these disciplines. Formerly PEHL 556.

HHPR 557. Research Methods (3). Prerequisite, satisfactory completion of a basic statistics course. Introduction to the process of planning and understanding research. Formerly PEHL 557.

HHPR 558. Research Design and Critique (3). Prerequisite, HHPR 557. Selection and definition of a specific research problem, review of literature for proposed research, design techniques, and critical analysis of research proposals. Formerly PEHL 558

HHPR 570. Liability/Risk Management in Health, Physical Education, Recreation and Athletics (3). Formerly PEHL 570.

HHPR 571. Grant Writing in Health, Leisure and Sport Programs (3). Overview of the grant writing process including sources, process, application, and administration. Formerly PEHL 571. Same as LES 482. May not receive credit for both.

HHPR 575. Principles of Administration in Health, Leisure, and Sport Programs (3). Formerly PEHL 575.

HHPR 577. Physical Education Curriculum Design (3). Design and creation of a physical education curriculum that meets state and national standards. Formerly PEHL 577.

HHPR 578. Physical Education Program Promotion (3). Understanding the various strategies currently being used by physical education teachers to promote their programs, and developing a school-based promotional plan. Formerly PEHL 578.

HHPR 579. Supervision of Student Teachers in Physical Education (3). Introduction to the history of supervision, a breakdown of the process and opportunities to practice supervision conferencing. Formerly PEHL 579.

HHPR 580. Physical Education Grant Writing and Fundraising (3). This course is designed to assist students in obtaining the skills and knowledge necessary for writing funding proposals in physical education and related fields. Formerly PEHL 580.

HHPR 581. Technological Applications in HHPR (3). Prerequisite, acceptance into HHPR graduate program or instructor permission. Introduction to technological applications in HHPR and strategies for delivery of CWU online M.S. degree program in HHPR. Formerly PEHL 581.

HHPR 595. Graduate Research (1-6). Prerequisite, permission of major advisor. Development and investigation of an approved laboratory or field research problem. May be repeated. Maximum of 6 credits may be included in Course of Study for the Master's degree. Formerly PEHL 595.

HHPR 598. Special Topics (1-5). Formerly PEHL 598.

HHPR 599. Seminar (1-5). May be repeated for credit. Formerly PEHL 599.

HHPR 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits. Formerly PEHL 700.

Graduate Courses in Physical Education

PE 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

PE 521. Advanced Football Coaching (3).

PE 523. Advanced Basketball Coaching (3).

PE 524. Advanced Track Coaching (3).

PE 525. Advanced Baseball Coaching (3).

PE 530. Gender in Sport (3). Role of women and men in sport and analysis of gender discrimination with models for change.

PE 540. Socio-Psychological Dimensions of Sport (3). The social and psychological factors which affect behavior and performance in sport.

PE 541. Sport and Culture (3). The interrelationship of sport with other aspects of the culture.

PE 542. Greek and Roman Concepts of Sport (3). Major influences and characteristics of sport and systematic exercise in early civilizations including the Mycenaean, Minoan, Greek, Etruscan and Roman.

PE 560. Systematic Analysis of Teaching Physical Education (3).

PE 561. Curricular Trends in Physical Education (3). Prerequisite, PE 300 or previous K-12 teaching experience. Investigation of current trends in Physical Education curriculum design.

PE 590. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U.

PE 591. Workshop (1-6).

PE 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

PE 598. Special Topics (1-6).

PE 599. Seminar (1-5). May be repeated for credit under different titles.

Graduate Courses in Recreation and Tourism

RT 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university. Formerly LES 500.

RT 501. Planning and Implementation of Outdoor Education Programs (3). Designed for teachers and school officials. Outdoor education values, organizational skills, program conduct, leadership recruitment and training. Formerly LES 501. Students may not receive credit for both.

RT 505. Hospitality Catering (3). Basics of off premise catering including menu planning, budgeting, logistics and marketing. FCSN 405, RT 405, and RT 505 are equivalent courses. Students may not receive credit for more than one.

RT 509. Maintenance Management I (2). Planning and design; systems scheduling; general maintenance management techniques in parks, recreation and leisure services operations. Formerly LES 509. Students may not receive credit for both.

RT 510. Maintenance Management II (2). Prerequisite, RT 509. Advanced maintenance management procedures. Emphasis on public relations, staff assessment, computer applications, innovate maintenance techniques, contract management, risk management and effective personnel management skills. Formerly LES 510. Students may not receive credit for both.

RT 574. Hotel Operations Analysis (2). Prerequisites, Math Basic and Breadth requirements, ACCT 301, RT 272 and permission. Analysis of hotel performance and forecasting, with tools typically used in a lodging environment. RT 474 and RT 574 are equivalent courses. Students may not receive credit for both.

RT 590. Cooperative Education (1-6). An individualized contracted field experience with business, industry, government, or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval is required. Grade will be S or U. Formerly LES 590.

RT 591. Workshop (1-6). Formerly LES 591.

RT 596. Individual Study (1-6). May be repeated. Formerly LES 596.

RT 598. Special Topics (1-6). May be repeated under different titles. Formerly LES 598.

RT 599. Seminar (1-5). May be repeated for credit under different titles. Formerly LES 599.

HISTORY

Graduate Faculty
Chair: Karen J. Blair
Coordinator: Daniel Herman
Language and Literature 100

Professors
 Karen J. Blair, 20th Century U.S., Women's History

Associate Professor
 Roxanne Easley, Russia, Eastern Europe
 Thomas Wellock, Contemporary U.S., Environmental, American West

Assistant Professors
 James Cook, East Asia
 Daniel Herman, U.S. Pre 1877

Admission Requirements

In addition to general regulations for admission to Master's programs, students with insufficient preparation who desire admission to programs in history may be required to take additional work before being admitted to graduate programs. Students admitted are required to demonstrate an ability to discover and interpret historical evidence and to write cogently and lucidly.

Master of Arts

History

The purpose of the program offered by the Department of History is to develop graduates possessing a range of historical knowledge and special competency in a particular area. Students receive systematic training in historical methods, sources, tools, and the interpretation of history. It is a further purpose of the program to train students for lives of productive scholarship and stimulating teaching as well as non-academic pursuits where historical background is required. Finally, in recognition that all students do not have the same objective, the M.A. degree program contains three options designed to suit different objectives. To achieve the purposes of the program, students will enroll in research seminars, historiography, reading courses, and lecture courses where needed. The individual's program will be established in consultation with a graduate committee.

Prerequisites

1. Attainment of undergraduate major in history.
2. Attainment of a 3.00 cumulative GPA for undergraduate work and a 3.25 GPA or better in the history major. Applicants with a GPA deficiency may petition the Department of History graduate committee for special consideration.

3. Students whose undergraduate major was in a subject other than history, but who nevertheless wish to complete a history graduate degree, must have completed at least 20 undergraduate, upper division history credits with a GPA of 3.00 or better prior to full admission to the graduate program.
4. Endorsement of the applicant by the history graduate committee.
5. Submission of official G.R.E. scores for the general examination.

Program. The Department offers three options leading to the M.A. The option selected by each student must be approved by the history graduate committee, and must include at least 45 credits as outlined in an approved Course of Study filed with Graduate Studies and Research.

Master of Arts History (Thesis Option)

This option is intended primarily for those students intending to pursue additional graduate work.

Required Courses	Credits
HIST 511, Historiography	5
HIST 512, History Graduate Reading Seminar AND	
HIST 515, History Graduate Research Seminar (15)	15
HIST 700, Thesis	6
Department-Approved Electives from 400 or 500 level courses	19
Total	45

Thesis. A thesis is required. A thesis prospectus must be approved and filed with Graduate Studies and Research. The final thesis copy must be in a form according to graduate school requirements.

Language Requirement. Reading knowledge of a foreign language acceptable to the history graduate committee is required. The examination will be conducted within the History Department. A research tool necessary for the student's area of specialization may be substituted for the language requirement with permission of the graduate committee. This requirement must be met before the student is admitted to candidacy.

Final Examination. Passing an oral examination in defense of the thesis, including the general field of the thesis.

Master of Arts History (Teaching Options)

There are two options directed mainly toward those intending careers in secondary teaching or non-academic fields. These options are not ordinarily intended for the student planning to pursue a Ph.D.

Project Option

Required Courses	Credits
HIST 511, Historiography	5
HIST 515, History Graduate Research Seminar (10) OR	
HIST 512, History Graduate Readings Seminar (10)	10
HIST 700, Project Study	6
Department-Approved Electives from 500 level courses in History	15
Department-Approved Electives from 400 or 500 level courses in History OR other approved fields	9
Total	45

The courses selected must be pertinent to the student's project.

Project Study. The completion of a satisfactory project either within the History Department or another approved field is required. The primary emphasis of the project shall be historical rather than pedagogical research. A project prospectus must be approved and filed with Graduate Studies and Research.

Final Examination. The student must pass an oral examination in defense of the project, including the general field of the project.

Examination Option

Required Courses	Credits
HIST 511, Historiography	5
HIST 515, History Graduate Research Seminar (10) AND	
HIST 512, History Graduate Readings Seminar (5)	15
HIST 700, Project Study	6
Department-Approved Electives from 500 level courses in History	19
Total	45

Written and Oral Examination. Students electing to take the exam option will take an eight-hour written and two-hour oral exam in two fields approved by the department's graduate committee. This exam is normally taken in the last quarter of their coursework. The examination fields are selected from the student's course of study. The student will use the six credits of History 700 to prepare for the exam by working with faculty to prepare a reading list and discuss appropriate themes.

Portfolio. The student's educational achievement will be formally assessed at the end of the program by means of a portfolio. The materials in the portfolio will be derived from the student's written work in his courses and evaluated by the department's graduate committee.

Graduate Courses in History

HIST 511. Historiography (5).

HIST 512. History Graduate Readings Seminar (5).

HIST 515. History Graduate Research Seminar (5). Formerly HIST 515.1, 515.2 and 515.3.

HIST 525. Renaissance and Reformation (5). HIST 525 and HIST 425 are equivalent courses. Students may not receive credit for both.

HIST 528. Modern Latin America (5). Analyzes the history of Latin America in the past two centuries, from the Wars of Independence until the present day. HIST 528 and HIST 328 are equivalent courses. Students may not receive credit for both.

HIST 529. The Tropics and the Modern World (5). Analyzes the history of the modern world through the history of tropical commodities. HIST 529 and HIST 329 are equivalent courses. Students may not receive credit for both.

HIST 530. Tudor-Stuart England (3-5). HIST 530 and HIST 430 are equivalent courses. Students may not receive credit for both. Formerly HIST 530.1/430.1.

HIST 531. Africa: The Crisis of Nation Building (5). An in-depth multi-disciplinary approach to the present political and socio-economic issues, problems and tensions in selected areas of Africa. HIST 531 and HIST 431 are equivalent courses. Students may not receive credit for both.

HIST 533. Selected Topics in African History (5). Specific matter will vary but emphasis will be on the social and cultural development of African states since pre-colonial times. HIST 533 and HIST 433 are equivalent courses. Students may not receive credit for both.

HIST 538. Conquests and Compromises: American Indian History since 1492 (5). Discussion and lecture course on interactions between American Indians and Europeans since the arrival of Columbus. HIST 538 and HIST 338 are equivalent courses but 538 requires additional reading, research, and writing assignments. Students may not receive credit for both.

HIST 540. The American Revolution (5). Causes and consequences of the American Revolution, 1688-1789. HIST 540, HIST 340 and HIST 440 are equivalent courses. Students may not receive credit for more than one course.

HIST 543. The West in American History (3-5). Exploration, territorial acquisition, patterns of settlement, economic development, and the influence of the frontier on American institutions. HIST 543 and HIST 443 are equivalent courses. Students may not receive credit for both.

HIST 544. Sectionalism, Civil War and Reconstruction (3-5). Slavery, the Old South, sectionalism, the breakdown of the Union, and secession. A military, political, social history of North and South during the Civil War, and the aftermath of the war. HIST 544 and HIST 444 are equivalent courses. Students may not receive credit for both.

HIST 546. Women in American History (5). A survey of the role of women, their treatment and response, in American society from colonial times to the present. HIST 546, HIST 346 and HIST 446 are equivalent courses. Students may not receive credit for more than one course.

HIST 549. History of Women and the West (5). Women in the western United States, with emphasis on the nineteenth and twentieth centuries; myths and stereotypes; women's work; community roles; class and racial/ethnic differences. HIST 549 and HIST 449 are equivalent courses. Students may not receive credit for both.

HIST 550. Exploring U.S. Cultural History (5). Thematic approach to nineteenth-century cultural transformations in U.S. Selected topics; mesmerism, utopias, true womanhood, women's rights, slave spirituals, confidence men, gold rushes. HIST 550 and History 450 are equivalent courses. Students may not receive credit for both.

HIST 551. 20th Century U.S. 1896-1919 (3-5). Imperialism, Progressivism, and World War I. HIST 551 and HIST 451 are equivalent courses. Students may not receive credit for both.

HIST 552. 20th Century U.S. 1919-1945 (3-5). Prosperity and depression; the New Deal and its implications; World War II, origins and conclusion. HIST 552 and HIST 452 are equivalent courses. Students may not receive credit for both.

HIST 553. 20th Century U.S. 1945 to the Present (3-5). Cold War, sedentary 50s, rebellious 60s, the Watergate era. HIST 553 and HIST 453 are equivalent courses. Students may not receive credit for both.

HIST 554. American Environmental History (5). Environmental values and practices of the diverse populations of America. HIST 554, HIST 354 and HIST 454 are equivalent courses. Students will be given credit for only one of the three courses.

HIST 563. History of American Foreign Relations Since 1941 (3-5). From Pearl Harbor to the present. HIST 563 and HIST 463 are equivalent courses. Students may not receive credit for both.

HIST 564. Latin American Revolutions (5). This course compares and contrasts the causes, courses, and consequences of the Mexican Revolution (1910-40), the Cuban

Revolution (1959-present), the Chilean Revolution (1970-73), and the Nicaraguan Revolution (1979-89). HIST 464 and HIST 564 are equivalent courses. Students may not receive credit for both.

HIST 565. History of the People's Republic of China (5). Evaluates the historical record of the Chinese Communists in power since the establishment of the People's Republic of China in 1949. HIST 565 and HIST 465 are equivalent courses. Students may not receive credit for both.

HIST 570. Medieval European History (5). Survey of Western European history from late antiquity to the sixteenth century; political, economic, social and religious thought and institutions. HIST 570 and HIST 370 are equivalent courses. Students may not receive credit for both.

HIST 571. German History, 1815-1918 (3-5). A political, diplomatic, socio-economic, and intellectual study of Germany from the end of the Napoleonic Era through World War I. Emphasis on German unification and the socio-economic background to World War I. HIST 571 and HIST 471 are equivalent courses. Students may not receive credit for both.

HIST 572. German History, 1918 to the Present (3-5). A political, socio-economic, and intellectual study of Germany with special attention to the causes, progress, and aftermath of the National Socialist State. HIST 572 and HIST 472 are equivalent courses. Students may not receive credit for both.

HIST 573. Russia to 1881 (3-5). The political, social, economic and cultural development of Russia from ancient times to the assassination of Alexander II. HIST 573 and HIST 473 are equivalent courses. Students may not receive credit for both.

HIST 574. Russia Since 1881 (3-5). The political, economic, social and cultural history of Russia and the Soviet Union since 1881. HIST 574 and HIST 474 are equivalent courses. Students may not receive credit for both.

HIST 576. History of Modern East Europe (5). Poland, Czech, Slovak Republics, Austria, Hungary, Romania, Yugoslavia, Bulgaria, Greece, Albania, with special attention to multi-ethnicity, economic underdevelopment and modernization, political dependence and nationalism. HIST 576 and HIST 376 are equivalent courses. Students may not receive credit for both.

HIST 579. Europe in the 20th Century (3-5). Events and movements which led to two wars; change in governmental structure in the cycles of war and peace. HIST 579 and HIST 479 are equivalent courses. Students may not receive credit for both.

HIST 580. Modern East Asia (5). A survey of the modern histories of China, Japan, and

Korea from 1600 to the present. Imperialism, nationalism, and the rise of communism are covered. HIST 580 and HIST 380 are equivalent courses. Students may not receive credit for both.

HIST 581. Understanding History (3-5). Analysis of the nature of history, of the way historians reason, and of the search for meaning in history. HIST 581 and HIST 481 are equivalent courses. May be repeated by graduate students only and with permission of the instructor.

HIST 582. Revolutionary China (3). The causes, course, and effects of the 20th century Chinese Revolution 1911-present. HIST 582 and HIST 482 are equivalent courses. Students may not receive credit for both.

HIST 583. Modern China (5). The history of China in the 19th and 20th centuries, including the nature of China's response to the West and the Chinese Revolution of the 20th century. Emphasis on internal social and economic change. HIST 583 and HIST 483 are equivalent courses. Students may not receive credit for both.

HIST 584. Modern Japan (3-5). The recent historical development of Japan beginning with the collapse of the Tokugawa Shogunate and the resumption of foreign contacts in the mid-19th century. Emphasis is given to the modernization process with its concomitant political, social, economic, and intellectual changes. HIST 584 and HIST 484 are equivalent courses. Students may not receive credit for both.

HIST 587. The Russian Revolutionary Movement (3-5). Origins and development of Russian radicalism through the Bolshevik Revolution of 1917. HIST 587 and HIST 487 are equivalent courses. Students may not receive credit for both.

HIST 588. Mexico in the Modern Era (5). The modernization and nationalization of Mexico, with emphasis on the social history of Mexico's frontiers. HIST 588 and HIST 488 are equivalent courses. Students may not receive credit for both.

HIST 589. Cuba and the Caribbean (5). Foreign intervention and the domestic social structure of Caribbean America. HIST 589 and HIST 489 are equivalent courses. Students may not receive credit for both.

HIST 590. Cooperative Education (1-8). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. HIST 590 and HIST 490 are equivalent courses.

HIST 591. Workshop (1-6). HIST 591 and HIST 491 are equivalent courses. Students may not receive credit for both.

HIST 595. Graduate Research (1-10). Prerequisite, permission of instructor. For students doing preliminary or ongoing thesis/project research. May be repeated for credit. May not be included in the Course of Study for the Master's degree. Grade will be S or U.

HIST 596. Individual Study (1-6). Prerequisite, permission of the instructor. For students who wish to do directed readings and study in secondary literature on specific topics that are not offered as existing courses. May be repeated for credit.

HIST 598. Special Topics (1-6).

HIST 599. Seminar (1-5). May be repeated.

HIST 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

INDIVIDUAL STUDIES PROGRAM

Program Coordinator:

Wayne S. Quirk, Associate Vice President for Graduate Studies, Research and Continuing Education
Barge 305

Master of Arts

Master of Education

Master of Science

Purpose. The purpose of the Individual Studies (IS) Program is to afford qualified applicants the opportunity to create sound master's degree programs of an interdisciplinary nature or focus on unique subject areas when the curricula of regular graduate degree programs do not meet the individuals' career objectives and/or needs. The approval of such programs is dependent upon:

- the qualifications of the applicant;
- the institution's ability to provide a sufficient number of relevant graduate level courses;
- a sufficient number of faculty qualified and willing to work with the student;
- adequate scholarly and/or creative resources.

CWU will offer IS programs only in fields where appropriate expertise and other resources exist as determined by the Associate Vice President of Graduate Studies and Research in consultation with the Graduate Council.

Each IS program must be as academically sound as traditional master's degrees programs housed in regular academic departments. Thus, it must demonstrate the quality, breadth, and depth normally associated with master's degrees and must be as intellectually rigorous.

Approved IS programs are administered by an interdisciplinary committee appointed by, and with oversight from, the Associate Vice President of Graduate Studies and Research. IS programs may be created under the Master of Arts, Master of Education, and Master of Science degree titles.

Application Process. Anyone contemplating the creation of an IS program should first meet with the Associate Vice President of Graduate Studies and Research before initiating the application process to discuss possible program options. The responsibility for creating an acceptable IS rests entirely with the applicant. If admitted, a graduate student in this program is expected to be highly motivated. He or she must work closely with the program advisor(s) and provide the Associate Vice President of Graduate Studies and Research with semi-annual program status reports. An applicant to an IS master's degree program must be able to meet the minimum requirements for admission to graduate study at CWU, including a minimum of a 3.0 grade point average in the last 90 quarter or 60 semester credit hours elected. The applicant must complete and submit a formal application, in accordance with the instructions in the application packet, including a non-refundable \$35 applicant fee. The Graduate Record Examination may be required at the discretion of the Associate Vice President of Graduate Studies and Research.

Each applicant is encouraged to apply using the Self-Managed Application process. This will insure efficient and rapid processing of the application. If he or she is unable to use the Self-Managed Application system, he or she may file the application materials separately. The application file must be complete before the Graduate School can act upon it. The applicant must follow all instructions included in the application packet. Materials submitted in support of an application cannot be returned nor will they be released for other purposes.

Program Description. In addition to the documents and materials required for the admissions process, each IS applicant must include a description of the IS program he or she wishes to create. The applicant should include a detailed explanation of the rationale for this program and explain why

her or his goals cannot be met by means of pursuing an established master's degree at CWU. The applicant should indicate how the proposed program would meet her or his educational objectives and professional aims.

Learner outcomes are critical to the success of CWU degree programs. As a result, each IS master's candidate is expected to prepare an acceptable goals statement in which anticipated learner outcomes are specified. These will be measured at the completion of the program as a partial means of determining whether each student has met degree requirements.

Program of Study. A comprehensive, proposed course of study is also required. The requisite form for detailing this may be obtained from the Graduate School. A justification for the selection of each election proposed should be included in the course of study. Please note that general graduate school regulations appearing in the CWU catalog must be observed, and all IS programs must include a master's thesis. In the process of designing the curriculum, applicants are expected to consult the publications of universities nation-wide to identify any programs similar in content and design to the one sought. Such information may provide useful information in constructing the program of study.

Number of Credit Hours. For an IS program of study to be approved by the Associate Vice President of Graduate Studies and Research, it must include a minimum of 45 quarter hours of graduate level credit, of which at least 25 credits must be numbered 501 or higher. In some cases more than the minimum of 45 credits will be required. The course of study must include 6 credits of 700 (Thesis) and may not normally include more than 10 credits of independent study. Prerequisite courses may also be required.

Graduate Committee. Each applicant seeking an IS program, must propose a Graduate Committee to the Associate Vice President of Graduate Studies and Research. Each committee member must be at least an associate member of the graduate faculty and the person whom the applicant wishes to chair the Advisory Committee must be a regular member of the graduate faculty. The applicant must work with these faculty to develop the proposed program of study. The proposed Graduate Committee members will meet with the Associate Vice President of Graduate Studies and Research to discuss the applicant's program of study and may be asked to meet with the Graduate Council as well.

All proposed Graduate Committee members are expected to discuss their participation on this committee with their respective department chairs. Department chairs must agree to allowing their faculty

members to participate on the IS committee and all proposed committee members must certify their willingness to serve. The committee constitution will be reviewed by the Associate Vice President of Graduate Studies and Research in conjunction with the Graduate Council. Following any needed discussions, the Associate Vice President of Graduate Studies and Research, in consultation with the Graduate Council, will determine the applicant's admissibility, along with the viability of the Graduate Committee, and communicate the decision to the applicant as quickly as possible.

Examinations and Assessment. An oral final examination is required on work completed in partial fulfillment of the IS master's degree requirements. This examination must include a defense of the thesis and an examination of studies completed. Some Graduate Committees may also require a written examination as well. The examination process is intended to assure that the student has met the objectives of her or his goal statement and that the learner outcomes have thus been achieved. If the student performs satisfactorily on the examination, the student's committee will write a summary statement of the student's accomplishments and competencies for inclusion in the student's permanent file.

Application Deadlines. The deadlines for submitting all application materials are as follows:

- April 1 for Summer and Fall Quarter
- October 1 for Winter Quarter
- January 1 for Spring Quarter

Applicants must meet these deadlines or risk jeopardizing their admission for the quarter requested.

Graduate Courses in Individual Studies

IS 590. Cooperative Education (1-6 credits).

An individualized contracted field experience with business, industry, government or social service agencies. The contractual arrangement involves a student learning plan, cooperating employer supervision and faculty and coordination. Prior approval is required. The grade will be S or U.

IS 596. Individual Study (1-6). Prerequisite, permission of the Dean for Graduate Studies and Research.

IS 700. Master's Thesis/Examination (1-6). Prerequisite, permission of chair of the student's graduate faculty supervisory committee. Designated to credit and record supervised study for the master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to six credits.

INDUSTRIAL AND ENGINEERING TECHNOLOGY

Program Coordinator
Walter R. Kaminski

Graduate Faculty Professors

Bill Bender, Construction Management
Dave Carns, Construction Management
Lad Holden, Electronics
Craig Johnson, Mechanical Engineering Technology
Walter R. Kaminski, Mechanical Engineering Technology
Carlos Oncina, Mechanical Engineering Technology
T. Q. Yang, Electronics
Tim Yoxtheimer, Electronics

Adjunct Professor
Juan Robertson

Program Objectives and Description

The Industrial and Engineering Technology Department offers a Master of Science Degree in Engineering Technology (MSET) having the specific purpose of broadening the technological background of persons holding Bachelor of Science degrees in the Engineering Technologies (ET), Industrial Technologies (IT), and similar or related degrees. The BS degree programs provide the graduate with hands-on, practical knowledge which can be immediately utilized in industry. However, technology is advancing so rapidly that it is necessary to expose the engineering technologist to some of the latest advances, that is, to update their knowledge base. Corporate downsizing, global market pressures, and rapidly expanding technology require a new type of engineering technologist, one that can function comfortably on a changing career path. This requirement produces the need of the technologist to be a lifelong learner. The tools for life long learning and research are the crux of the MSET program. The MSET program is multidisciplinary, giving the graduate student sufficient choices to fit diverse needs.

Admission Requirements:

Incoming students are expected to meet all of the requirements of the Graduate School, have a solid background in science and mathematics, and show evidence of scholarship. All students entering the MSET program are expected to have a background equivalent to that required for the Bachelor of Science Degree in the Engineering Technologies at CWU. This requires that the

candidate have a bachelor's degree from a recognized institution and have at least two quarters of calculus and three quarters of a combination of general physics and chemistry. If English is a secondary language, students must score 550 or more on the TOEFL examination. Deficiencies in the student's undergraduate training as determined by the IET department at the time of matriculation must be removed without graduate credit during the first year of graduate study. Transfer students will be considered using the same criteria, with consideration for equivalent graduate course work completed elsewhere.

Application Deadlines and Supporting Materials:

Applications and all supporting materials are due by April 1 for Fall quarter entrance. Applications will include a statement of background and reason for wishing enrollment into the MSET program, official transcripts, and three letters of recommendation. The applicant must have maintained at least a 3.0 average in all course work attempted during the last 90 quarter hours (60 semester hours) of study. Students having a GPA of less than 3.0 may be admitted conditionally at the discretion of the Associate Vice President of Graduate Studies, Research and Continuing Education.

Program Requirements

The IET Department offers a Master's degree that requires a minimum of 45 credit hours of graduate study and a thesis. A total of 30 credit hours of required coursework is required of all students. The student is then required to select at least 15 credit hours from a list of technical electives which will then total 45 credit hours. The student must take at least 25 credit hours of course work at the 500 level. Only 9 quarter credit hours may be transferred before being admitted into the master's program. Candidates must pass a final oral examination on their thesis project and supporting coursework, given by a thesis committee consisting of the Thesis Advisor and two other faculty. Normal completion of the MSET will require two academic years of full-time study. The student that is enrolled on a part-time basis will require more than two academic years, the total time required will be a function of course load.

Graduate Committee

The student must have a three member graduate committee, selected in consultation with the advisor. Two members must be from the Industrial and Engineering Technology Department.

Master of Science in Engineering Technology (3000)

General Requirements	Credits
IET 521, Product Design and Development	4
IET 522, PLC Applications	4
IET 525, Systems Analysis and Simulation	4
IET 530, Fundamentals of Lasers	4
IET 560, Finite Element Analysis	4
IET 577, Robotics	4
*IET 700, Thesis or Option	6

Required Course Total 30

Note: * Students electing to do a written examination will select 6 credits of approved coursework in lieu of IET 700.

Department-Approved Technical Electives

The student must select 15 credits from the following list to complete a total program of 45 credit hours.

- IET 512, Alternative Energy Systems (4)
- IET 523, Emerging Technologies (4)
- IET 524, Quality Control (4)
- IET 526, Engineering Project Cost Analysis (4)
- IET 532, Generation and Transmission of Electrical Power (4)
- IET 555, Engineering Project Management (3)
- IET 582, Plastics and Composites (4)
- IET 583, Ceramics and Composition (4)
- IET 585, Ergonomics (4)
- IET 592, Field Studies (4)
- IET 595, Graduate Research (1-6)
- ET 596, Individual Studies (3)
- IET 599, Seminar (1)
- MET 423, Computer Aided Design and Manufacturing (4)
- GEOG 443, Energy Policy (5)
- CMGT 442, Building Service Systems (4)
- ECON 462, Economics of Energy Resources and Environment (5)

Elective Total 15

Program Total 45

Graduate Courses in Industrial and Engineering Technology

- IET 500. Professional Development (1-5).** Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.
- IET 512. Alternative Energy Systems (4).** Prerequisite, permission of instructor. Study of alternative energy technology and their societal issues. Similar to MET 412. Credit for both granted only by department chair.
- IET 521. Product Design and Development**

(4). Prerequisites, MET 419 (or equivalent) or permission of instructor. Methodology for the design and development of industrial and commercial products from conceptual stage to saleable product. Three hours lecture and two hours laboratory per week.

IET 522. Programmable Logic Controller (PLC) Applications (4). Prerequisite, permission of instructor. A study of programmable logic controller concepts, components, systems, programming, and applications. Lecture and laboratory. Similar to EET 373. Credit for both granted only by department chair.

IET 523. Emerging Technologies (4). Prerequisites, permission of instructor. A comprehensive examination of recent technological innovations in materials, manufacturing, electronics, and instrumentation, with emphasis on design and application case studies.

IET 524. Quality Control (4). Prerequisite, OMIS 221 or permission of instructor. Provides foundation for understanding and applying statistical quality control techniques and product reliability procedures. Similar to IET 380. Credit for both granted only by department chair.

IET 525. Systems Analysis and Simulation (4). Prerequisite, MET 327 (or equivalent) or permission of instructor. Theoretical and practical techniques for modeling and analyzing various systems including product designs, manufacturing facilities, and fluid/thermal systems. System testing and evaluation methodology will be investigated.

IET 526. Engineering Project Cost Analysis (4). Techniques of economic cost analysis and modeling applied to engineering projects. Similar to IET 301. Credit for both granted only by department chair.

IET 530. Fundamentals of Lasers (4). Prerequisite, PHYS 113 or permission of instructor. Overview of Laser technology with emphasis on characteristics, safety and application. Four hours lecture per week.

IET 532. Generation and Transmission of Electrical Power (4). Prerequisite, EET 332 or equivalent. A study of the generation and transmission of electrical energy. Similar to EET 432. Credit for both granted only by department chair.

IET 538. Readings in Industrial Education (3). Prerequisite, student must be a graduate. A study of the economic, social, political and philosophical factors that have motivated and influenced the development of industrial education. Leaders, agencies and movements shall also be investigated.

IET 555. Engineering Project Management (3). Fundamental tools of engineering

project management. Topics; contract management, scheduling and estimating cost, cost control, conflict management, team building, negotiating, and personal time management.

IET 560. Finite Element Analysis (4). Prerequisites, IET 160, MET 426, or permission of instructor. Computerized modeling of structural, vibrational, and thermal design problems. Lecture and laboratory. Similar to MET 420. Credit for both granted only by department chair.

IET 577. Robotics (4). Prerequisites, EET 375 and EET 342 or permission of instructor. Microprocessor applications in robotics, automated systems, and digital control. Lecture and laboratory. Similar to EET 477. Credit for both granted only by department chair.

IET 582. Plastics and Composites (4). Prerequisites, CHEM 111/111L or CHEM 181/181L or permission of the instructor. Composition, characteristics and classifications of plastics and composite materials incorporating design, industrial applications, processing and fabrication. Similar to MET 382. Credit for both granted only by department chair.

IET 583. Ceramics and Composites (4). Prerequisites, CHEM 181 or CHEM 111 or permission of the instructor. Composition characterization and classification of ceramics and related composite materials incorporating industrial applications, processing and fabrication. Similar to MET 483. Credit for both granted only by department chair.

IET 585. Ergonomics (4). Study of human characteristics for the appropriate design of the work environments, promoting safety and work efficiency. Similar to SHM 483. Credit for both granted only by department chair.

IET 592. Field Studies (1-10). Prerequisite, faculty advisor and department approval. No more than 10 credits may be taken toward the Master degree.

IET 595. Graduate Research ((1-6). Prerequisite, permission of advisor. Conduct research or use for program evaluation activity. Maximum of 6 credits may be included on the Course of Study for the Master's degree.

IET 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

IET 598. Special Topics (1-6).

IET 599. Seminar (1-5). May be repeated.

IET 700. Thesis or Option (6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, or examination. Grade will be either S or U. May be repeated for up to 6 credits.

INFORMATION TECHNOLOGY AND ADMINISTRATIVE MANAGEMENT

The Information Technology and Administrative Management department does not offer any graduate degrees at this time.

Graduate Programs and Courses in Administrative Management on Reserve

Master of Education in Business and Marketing Education.

ADMG 510. Supervisory Skills (3); BSED 512. Total Quality Learning (2); BSED 520. Tests and Measurements in Business Education (3); BSED 524. Business Education Program Design (3); BSED 525. Business and Marketing Education Issues (3); BSED 526. Improvement of Instruction in Basic Business (3); BSED 528. Improvement of Instruction in Keyboarding and Computer Applications (3); BSED 529. Improvement of Instruction in Accounting (3); BSED 531. Web-Based Design for Distance Learning. (3); BSED 546. Office Internship (1-6); BSED 592. Practicum (3-12); BSED 594. Research Practicum (3); BSED 595. Research (3); BSED 700. Master's Thesis, Project Study and/or Examination (1-6); ME 512. Total Quality Learning (2); ME 521. Marketing Education Model Program (3); ME 525. Business and Marketing Education Issues (3); ME 531. Improvement of Instruction in Marketing and Distribution (3); ME 561. Program Development in Marketing Education (3); ME 562. Curriculum Design in Marketing Education (3); ME 592. Practicum (3-12); ME 594. Research Practicum (3); ME 595. Research (3); ME 700. Master's Thesis, Project Study and/or Examination (1-6).

Graduate Courses in Business Education

BSED 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

BSED 501. Teaching Applied Math (2). Curriculum design, context and evaluation for applied math in career and technical education. BSED 501 and ME 501 are equivalent courses. Students may not receive credit for both.

BSED 502. Teaching Applied Math-Advanced (2). Instruction and teaching strategies for upper units of applied math in career and technical education. BSED 502 and ME 502 are equivalent courses. Students may not receive credit for both.

BSED 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's degree.

BSED 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

BSED 598. Special Topics (1-6).

BSED 599. Seminar (1-5). May be repeated.

Graduate Courses in Information Technology

IT 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's degree.

Graduate Courses in Marketing Education

ME 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

ME 501. Teaching Applied Math (2). Curriculum design, context and evaluation for applied math in career and technical education. ME 501 and BSED 501 are equivalent courses. Students may not receive credit for both.

ME 502. Teaching Applied Math-Advanced (2). Instruction and teaching strategies for upper units of applied math in career and technical education. ME 502 and BSED 502 are equivalent courses. Students may not receive credit for both.

ME 591. Workshop (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's degree.

ME 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

ME 598. Special Topics (1-6). May be repeated.

ME 599. Seminar (1-5). May be repeated.

LAW AND JUSTICE

Web Site

<http://www.cwu.edu/~lajhome/>

Faculty

Interim Chair: Warren Street, Ph.D.
Psychology Building 463

Professor

Charles Reasons, LL.B., Ph.D., Criminology,
Criminal Justice, and Pre-Law

Associate Professors

J. Michael Olivero, Ph.D., M.S.W.,
Corrections, Criminology, Research
Methods, Criminal Justice

James B. Roberts, J.D., M.S.W., Legal
Research, Correctional Law, Correc-
tional Counseling, Paralegal Studies
and Criminal Justice

Assistant Professors

Mark DeForrest, J.D., Pre-Law/Paralegal
Rodrigo Murataya, M.P.A., Police Personnel
Administration, Administration of
Justice, Criminal Investigation, Intro to
Criminal Law, Police Community
Relations, Research Methods (Yakima
Center Director)

Mary Ellen Reimund, M.A., J.D., LL.M.,
Criminal Law, Civil Law, Alternative
Dispute Resolution (SeaTac Center
Director)

Key Sun, LL.B., M.A., M.S.W., Ph.D.,
Methodology, Correctional Counseling,
Criminal Justice, Psychology
(Steilacoom Center Director)

Lecturer

Robert Pattison, M.A., Corrections
(Lynnwood Center Director)

Law and Justice Graduate Programs and Courses on Reserve

Master of Science in Law and Justice; LAJ 511, Theory and Practice (5); LAJ 515, Personnel Issues in Criminal Justice (5); LAJ 525, Race, Class, Gender and the Administration of Justice (5); LAJ 535, Research Methods (5); LAJ 540, Law 540, Law and Social Control (5); LAJ 545, Ethical Issues (5); LAJ 575, Legal Liability of Criminal Justice Professionals (5); LAJ 530, History of Criminal Justice (5); LAJ 520, Constitutional Issues in Criminal Justice (5); LAJ 596, Individual Study (1-6); LAJ 598, Special Topics (1-5); LAJ 690, Internship (1-6); LAJ 700, Master's Thesis, Project Study and/or Examination (1-5).

LIBRARY SCIENCE

Dean: Thomas M. Feischl

Faculty

Professors:

Daniel G. CannCasciato
John K. Creech
Gerard P. Hogan
Patrick L. McLaughlin
Mary J. Wise
Thomas Y. Yeh

Associate Professors:

Jennifer L. Jaques
Janice L. (Jan) Jorgensen
Patrick A. Owens

Assistant Professor

Kirsten Erickson

Library Science Course

LIB 500. Professional Development (1-5).

Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

MATHEMATICS

Graduate Faculty

Chair: Stuart Boersma
Bouillon 107F

Professors

Alla Ditta Choudary, Algebraic Topology
James D. Harper, Harmonic Analysis
Scott M. Lewis, Math Education, History of
Mathematics
Cen-Tsong Lin, Probability and
Mathematical Statistics

Associate Professors

Stuart F. Boersma, Differential Geometry,
General Relativity
Stephen P. Glasby, Computational Algebra,
Representation Theory
Mark Oursland, Mathematics Education

Assistant Professors

Yvonne Chueh, Actuarial Science, Statistics
Tim Englund, Algebra
Jonathon Fassett, Topology, Dynamical
Systems

Michael Lundin, Mathematics Education
Aaron Montgomery, Topology, Algebra

Master of Science Mathematics

The M.S. degree program in Mathematics is currently on reserve.

Master of Arts for Teachers

Mathematics

Program Coordinator:

Mark D. Oursland

Bouillon 107D

The Master of Arts for Teachers, Mathematics, program has been structured mainly for junior and senior high school mathematics teachers. It also may prepare a student for community college teaching and for advanced study in mathematics education. Sequencing of the required coursework is minimal and makes it possible in most cases to complete all the requirements for the degree in three consecutive summer sessions.

Admission Requirements. In addition to general regulations for admission to Master's programs, the Department prefers that a student has earned a baccalaureate degree with a major in mathematics or equivalent from an accredited college or university. A student with a baccalaureate degree with a major other than mathematics may be admitted to the graduate program upon the recommendation and permission of the Chair of the Department of Mathematics. Any deficiencies for regular admission must be removed during the first year of graduate study.

Applicants should have one year of teaching experience certified by an appropriate school official.

Program. The student shall complete at least 45 credits as outlined in an approved Course of Study filed with Graduate Studies and Research.

Required Courses	Credits
MATH 522, Modern Programs in Mathematics	3
MATH 523, Math Methods for Jr. High School	3
MATH 524, Math Methods for High School	3
MATH 550, Transformational Geometry ..	3
MATH 562, Modern Algebra for Teachers .	3
MATH 570, Calculus for Secondary Teachers	3
MATH 572, Elementary Real Analysis	3
Educational Foundations and Research Courses	9
MATH 700, Thesis or Non-Thesis Option Project	3-6
Committee approved electives	9-12

Total 45

Project, Thesis. The choice among a written report, field study or other project, or a formal research problem in mathematics or mathematics education which results in a thesis based upon the student's goals, in close consultation with the student's graduate committee.

Graduate Courses in Mathematics

- MATH 500. Professional Development** (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.
- MATH 510. Games of Chance** (3). Requiring only the fundamental ideas of basic probability, this course applies and investigates the popular casino games of chance, gambling systems and strategies, the "law of averages," cheating, and the "Gambler's Ruin." Offered summers only.
- MATH 515. Probability and Statistics for Elementary School Teachers** (2). Concepts and methods of probability and statistics as used in the elementary classroom. Offered summers only.
- MATH 522. Modern Programs in Mathematics** (3). Prerequisite, one year of teaching experience in mathematics or permission. Contemporary programs in secondary school mathematics. Offered summers only.
- MATH 523. Math Methods for Jr. High School** (3). Prerequisite, one year of teaching experience in mathematics. Problems and methods associated with the teaching of mathematics in the junior high or middle school. Offered summers only. Formerly MATH 524.1. Students may not receive credit for both.
- MATH 524. Math Methods for High School** (3). Prerequisite, one year of teaching experience in mathematics. Problems and methods associated with the teaching of mathematics in high school. Offered summers only. Formerly MATH 524.2. Students may not receive credit for both.
- MATH 530. Mathematical Recreations** (3). An examination of selected examples of puzzles, paradoxes, brain teasers, and parlor games and a brief investigation of the mathematical principles on which they are based. Primarily for the experienced junior and senior high school mathematics teacher seeking motivational materials. Offered summers only.
- MATH 535. Adventures Among the Numbers** (3). Prerequisite, MATH 430 or permission. Tricks, puzzles, games and patterns involving the ordinary whole numbers of arithmetic; suitable for stimulating interest in the basic properties of numbers and the operations of arithmetic. Intended primarily for teachers in the higher elementary grades as well as secondary school teachers. Offered summers only.
- MATH 550. Transformational Geometry** (3). Prerequisite, MATH 455 or permission.

A study of the group of transformations of the plane: reflections, rotations, translations, glide reflections. As time permits the properties of dilations and affinities also will be discussed. Offered summers only.

- MATH 552. Experiences in Geometry for Elementary Teachers** (3). An informal introduction to, or a reacquaintance with, those geometric concepts traditionally introduced in grades K-6. Content oriented, classes are centered around problem-solving activities. Prerequisite: one year of successful teaching at the elementary level. Offered summers only.
- MATH 553. Intuitive Geometry for Teachers of Grades 4-8** (3). Prerequisite, one year of teaching experience.
- MATH 554. Fractal Geometry** (3). Introduction to the development and applications of fractal geometry. Prerequisite, MATH 360 or equivalent, or instructor's permission. (Offered summers only). Computer generations of fractals as well as the mathematics behind it.
- MATH 560. Mathematical Experiences for Elementary Teachers** (3). Open-ended laboratory activities that emphasize both the construction and uses of motivational aids in problem solving, grades K-6. Prerequisite: At least one year of successful teaching at the elementary level. Offered summers only.
- MATH 562. Modern Algebra for Teachers** (3). Prerequisites, MATH 360 or equivalent and one year of teaching experience. Re-examination of the fundamental algebraic structures: groups, rings, integral domains and fields, with examples and applications. Offered summers only. Previously MATH 460. Student may not receive credit for both.
- MATH 566. Matrices and Their Applications** (3). Prerequisite, MATH 163.1 or equivalent. Matrix algebra including finite Markov chains with applications to business, psychology, genetics, and learning models. Sociometric applications to conflict and dominance. Offered summers only.
- MATH 570. Calculus for Secondary Teachers** (3). Prerequisite, MATH 173 or equivalent and one year of teaching experience. A re-examination of the processes of differentiation and integration emphasizing their application to the natural, behavioral, social and managerial sciences. Offered summers only. Previously MATH 370. Student may not receive credit for both.
- MATH 572. Elementary Real Analysis** (3). Prerequisite MATH 173 or equivalent and one year of teaching experience. Examines fundamental concepts of sets, sequences, limits, series, functions, continuity and

differentiability. Offered summers only. Previously MATH 470. Student may not receive credit for both.

- MATH 591. Workshop** (1-6). No more than two workshops for a combined maximum of 8 credits can be applied toward a Master's program.
- MATH 595. Graduate Research** (1-10). Prerequisite, permission of advisor. Grade will be S or U. May be repeated for credit. A maximum of 5 credits may count toward degree requirements.
- MATH 596. Individual Study** (1-6). Prerequisite, permission of instructor.
- MATH 598. Special Topics** (1-6).
- MATH 599. Seminar** (1-5). Prerequisite, permission of instructor. May be repeated for credit.
- MATH 700. Master's Thesis, Project Study and/or Examination** (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

MUSIC

Graduate Faculty
Chair: Peter Gries
Hertz Hall 101

Professors

Joseph Brooks, Clarinet, Saxophone, Woodwind Methods
Larry D. Gookin, Bands, Low Brass, Music Education, Conducting
Peter Gries, Piano, Theory, Counterpoint, Analysis
Linda Marra, Voice, Opera, Diction, Literature, Pedagogy
Mark Polishook, Composition, Theory, Orchestration, Electronic/Computer Music
Carrie B. Rehkopf-Michel, Violin, Viola, Fundamentals
John Michel, Cello, Chamber Music, Pedagogy
Hal Ott, Flute, Recorder, History, Literature
John F. Pickett, Piano, Theory, Music History
Jeffrey Snedeker, Horn, Brass Methods, Music History

Associate Professors

Chris Bruya, Jazz Studies, Theory
Vijay Singh, Jazz Studies, Choir, Voice, Music Business

Assistant Professors

Mark Babbitt, Trombone, Symphonic Band, Theory
Mark Goodenberger, Percussion

John Harbaugh, Trumpet, Jazz Studies
Diane Reich, Voice, Opera
Linda Woody, Music Education

Piano Technician

Harry Whitaker

Instructors

David Asplin, Composition
Sarah Bahouddin, Oboe
Shirley Diamond, Saxophone, Woodwind
Methods
Jim Durkee, Guitar
Alan Futterman, Bassoon
Margret Gries, Upper Strings Class Methods,
Music History, Piano, Organ,
Harpsichord, Aesthetics
Jon Hamer, String Bass
Sid Nesselroad, Voice
Barbara Pickett, Piano, Class Piano

Artist in Residence:

Paul-Elliott Cobbs, Orchestra Conductor

Master of Music

The Master of Music curriculum is designed to provide opportunity for depth of study in an area of specialization, to increase professional competence in teaching and performance, and to prepare for continued self-directed study or advanced graduate study.

Program. All candidates shall complete at least 45 credits as delineated in an approved Course of Study filed with the Office of Graduate Studies and Research. The major fields are a) composition; b) conducting; c) performance; d) performance-pedagogy; e) music education. At least one-third of the total credit requirements must be in the major field, including six credits of thesis; one-third in other music courses, including three credits of ensemble and three credits of MUS 521 (Methods of Musical Research); and one-third may be elective courses in supportive areas from any discipline. At least 25 credits applied toward the degree must be at the 500 level or above. Students are expected to plan their program with a graduate advisor and committee.

After meeting minimum criteria for admission into a specific Master's degree for each major, candidates must take diagnostic examinations in music history and music theory at the beginning of their first quarter of graduate study. In addition, non-performance majors must also demonstrate a level of musicianship equal to what would be considered appropriate for 300 level study. Students may demonstrate this level of musicianship in several ways, appropriate to the desired degree program or deemed appropriate by the evaluating committee after consultation with the student. Examples include a performance audition in an applied area or conducting (live or

taped), a videotape or audiotape of a performance directed by the applicant, or a videotape of a music lesson or class taught by the applicant. Deficiencies in any of the above will be delineated to the student by the faculty along with recommendations for remediation. These recommendations may take the form of, but are not limited to, coursework, selected readings, and applied study. It is the candidate's responsibility to demonstrate the successful satisfaction of any deficiency. No Master of Music degree will be awarded until these appraisals have been passed. The Department of Music recommends that the candidate attempt to satisfy these entrance appraisals at the earliest opportunity.

Admission Requirements. In addition to general regulations for admission to the Master's program, the following requirements apply to the Master of Music Degree:

1. Candidates must have a bachelor's degree from an accredited college with a major in music or its equivalent.
2. Acceptance into a specific major field will require an evaluation of a candidate's ability conducted by a committee of three faculty members, two of whom will be from the particular major field. Normally one of these two will serve as the candidate's Graduate Advisor, and the committee as a whole may serve as the candidate's Graduate Committee. Admission into the institution does not assure admission into a music program. Therefore, candidates should complete the Specific Requirements for Major Fields before arrival on campus, but no later than the end of the first quarter.
3. For admission requirements to each field, see section 1 in each field entry under Specific Requirements for Major Fields.

General Requirements	Credits
MUS 521, Methods of Musical Research...	3
Courses in major field, including MUS 700, Thesis (6).....	15-21
Other studies in music, including 3 credits in ensemble courses.....	12-15
Elective courses in supportive areas....	6-15
	Total 45

Specific Requirements for Major Fields:

A. Composition

1. Admission to this program will be based upon an evaluation of appropriate compositions submitted by the student.
2. Courses in the major field: select from MUS 444, 522, 523, 545, 584, 599, 613.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. The thesis (MUS 700, 6 credits) will be

an original composition of a level appropriate as a final project and a covering paper. Normally this paper will be based on the thesis composition.

B. Conducting

1. Admission to this program will require faculty evaluation of evidence of an appropriate level of musicianship, satisfied in one of the following ways:
 - a) a performance or conducting audition
 - b) a videotape of a performance directed by the applicant
 - c) other evidence deemed appropriate in consultation with the evaluating committee.
2. This program will require a one-year residency prior to graduation. Candidates will work under the direct supervision of one of the three conductors of the major performance ensembles (Orchestra, Wind Ensemble, Choir) during each quarter in residence. The students will be encouraged to work in all three areas whenever possible.
3. Courses in the major field: select from MUS 440, 441, 540, 541, 585, 599, 615.
4. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
5. As a thesis (MUS 700, 6 credits) the student will conduct a public performance and submit a covering paper. Normally this paper will be based on the works conducted.

C. Performance

1. Admission to this program will be based upon an evaluation of an audition equivalent in scope to at least one-half of a full baccalaureate recital.
2. Courses in the major field: a minimum of 10 credits of major applied instruction, MUS 664, in addition to the 6 credits of thesis study. Vocal performance majors must also have MUS 536 plus one year each of college level French and German. Other selections: MUS 551, 561, 592, 614.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits) the student will present a full public recital and submit a covering paper. Normally this paper will be based on the works presented on the recital.

D. Performance-Pedagogy

1. Admission to this program will be based upon an evaluation of an audition equivalent in scope to at least one-half of a full baccalaureate recital, and evaluation of a paper written for an undergraduate class in the field of music instruction.

2. Courses in the major field: a minimum of 6 credits of individual instruction, MUS 664, in addition to the 6 credits of thesis study; 3 credits in MUS 425. Additional requirements for vocal majors as in the performance major.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits) the student will present either:
 - a) a demonstration project, a research paper or a covering paper based on the project and one-half of a public recital.
OR
 - b) a demonstration project, one-half of a public recital and a covering paper based on the works presented on the recital.
OR
 - c) a research paper and one-half of a public recital.

E. Music Education

1. Admission to this program will be based upon:
 - a) evaluation of an undergraduate paper in the field of music education.
 - b) the completion of a least one year of successful public school music instruction (under a special request made by the entering student, this requirement may be waived by the music education committee).
 - c) evidence of an appropriate level of musicianship, satisfied in one of the following ways:
 - 1) a performance audition
 - 2) a videotape or audiotape of a performance directed by the applicant
 - 3) a videotape of a music lesson or class taught by the applicant
 - 4) other evidence deemed appropriate in consultation with the evaluating committee.
2. Courses in the major field should include those that enable students to understand and evaluate research in music education: select from MUS 425, 520, 582, 583, 599, 611.
3. Other studies in music should include a minimum of 3 credits in history or literature and 3 credits in theory.
4. As a thesis (MUS 700, 6 credits), the student will present either
 - a) a research thesis.
OR
 - b) a demonstration, analytical or creative project and a covering paper based on the project.

Final Examination

All students must pass a comprehensive final examination, oral, or written and oral, based on their coursework and the thesis. Before the Final Examination can be scheduled, students must have:

1. **satisfied any recommendations made to correct deficiencies revealed by the diagnostic exams.**
2. **completed and submitted the written portion of the thesis.**

According to university policy, an application for the final examination, approved by the student's graduate committee, must be filed in the Graduate Office at least three weeks in advance of the examination. This application has several specific parts to it, so early acquisition and completion of this form is strongly recommended. Consult the Graduate Office for any and all appropriate deadline dates.

For more details about Graduate Studies in Music, see the Department of Music's Handbook for Graduate Studies available in the Music Office (Hertz 101).

Graduate Courses in Music

Performance activities are designated by the following code:

- A. Piano
- B. Voice
- C. Strings
- D. Woodwinds
- E. Brass
- F. Organ
- G. Percussion
- H. Guitar
- I. Recorder
- K. Harpsichord
- L. Mixed

MUS 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

MUS 510. Vocal Jazz Choir (1). By permission of instructor. May be repeated for credit. For graduate students. See MUS 210 for description.

MUS 512. Big Band Drumming (1). Prerequisite, permission of instructor. Designed to give Jazz Music Educators knowledge of Big Band drumset playing technique and the ability to coach student drummers in various styles of drumming.

MUS 513. Flute Choir (1). Prerequisites, previous experience in flute performance and permission of instructor. May be repeated for credit. Two hours of rehearsal per week plus all scheduled rehearsals and performances. For graduate students.

MUS 514. Brass Choir (1). By permission of instructor. May be repeated for credit. For

graduate students. See MUS 214 for description.

MUS 515. Chamber Orchestra (1). By permission of instructor. May be repeated for credit. For graduate students. See MUS 215 for description.

MUS 516. Rhythm Sections for Jazz Educators (1). Prerequisite, permission of the instructor. Designed to acquaint Jazz Music Educators with performance techniques and stylistic characteristics of the three instruments of a standard jazz rhythm section: Bass, Piano and Drumset.

MUS 517. Chamber Music Ensemble (1). By permission of instructor. May be repeated for credit. One hour coaching plus two hours rehearsal per week plus all scheduled rehearsals and performances. Instruction available in performance areas A-E, G-I, L.

MUS 518. Sound Reinforcement I (1). Prerequisite, permission of the instructor. Designed to give Jazz Music Educators practical knowledge of the components of a sound system and how to operate them as part of normal jazz ensemble performance practice.

MUS 519. Sound Reinforcement II (1). Prerequisites, MUS 518 or permission of the instructor. Designed to give Jazz Music Educators further knowledge of sound systems, system design and basic repair and maintenance and more refined operation.

MUS 520. Methods of Teaching Theory (3). Prerequisite, permission of instructor.

MUS 521. Methods of Musical Research (3). Learning to formulate a logical approach to the process of identification, location, and evaluation of materials available to the music researcher, and developing expertise in technical writing about music.

MUS 522. Advanced Orchestration (3). Prerequisite, MUS 422C or permission of instructor. May be repeated for credit. Study of various scores and treatises. Individual projects.

MUS 523. Advanced Composition (3). Prerequisite, MUS 420. May be repeated for credit. Selected topics in composition.

MUS 525. Pedagogical Techniques for Instrumental Directors (3). Philosophy and psychology of music education through methods and materials; observation of teachers in the rehearsal, individual research.

MUS 526. Keyboard Harmony and Improvisation (3). Keyboard experience; formal and free harmonization of melodies, pianistic style and four-part vocal style.

MUS 527. The General Music Program (3). Prerequisites, MUS 321, 424, EDCS 442 or permission of instructor. A review of

- teaching general music in the public schools.
- MUS 529. Percussion Ensemble (1).** By permission of instructor. May be repeated for credit. For graduate students. See MUS 229 for description.
- MUS 531. Keyboard Music Since 1750 (3).** Prerequisite, permission of instructor.
- MUS 532. Stage Band (1).** By permission of instructor. May be repeated for credit. For graduate students. See MUS 232 for description.
- MUS 535. Laboratory Choir (1).** By permission of instructor. May be repeated for credit. For graduate students. Two hours of rehearsal per week plus all scheduled rehearsals and performances.
- MUS 536. Diction in Singing Foreign Languages (3).** Prerequisite, permission of instructor. Italian, French, and German.
- MUS 540. Choral Interpretation and Techniques (3).** For choral directors of all levels in the public schools and churches. New materials, voice production, intonation, interpretation, conducting techniques, diction.
- MUS 541. Advanced Conducting (3).** Prerequisite, MUS 342 or equivalent. Emphasis upon the conducting of advanced literature in the major performance media. May be repeated for credit.
- MUS 545. Modern Counterpoint (3).** Prerequisite, MUS 346.
- MUS 546. Vocal Jazz Arranging (1).** Prerequisite, permission of the instructor. Techniques of arranging for jazz choirs: including examination of voice ranges, harmonic language, voicings of different ensembles and jazz textures, melodic structures, and rhythms.
- MUS 547. Electronic Music Composition (3).** Prerequisite, MUS 347. Studies in electronic music with emphasis on compositional technique.
- MUS 548. Instrumental Jazz Arranging (1).** Prerequisite, permission of the instructor. Survey of large jazz ensemble (Big Band) arranging techniques, including modular construction, basic melody writing, voicings and idiomatic characteristics of the instruments in a big band.
- MUS 553. Musical Direction of Broadway Musicals (3).** Prerequisites, permission of instructor and MUS 246 or equivalent. Techniques and methods of musical direction of Broadway musicals for the secondary school teacher. Choosing a work, preparing rehearsals, making a schedule, working with singers. MUS 553 and MUS 453 are equivalent courses. Students may not receive credit for both.
- MUS 554 C, D, E, G. Advanced Techniques Class (1).** For advanced study on secondary instruments. Prerequisite, one section of MUS 254 C, D, E, G or equivalent.
- C. Strings
D. Woodwinds
E. Brass
G. Percussion
- MUS 555. Teaching Instrumental Jazz Improvisation (1).** Prerequisite, permission of the instructor. Basic theory and pedagogy of jazz improvisation instruction, including chord/scale relationships, progression simplification and a survey of tunes appropriate for various levels of skill.
- MUS 556. Teaching Vocal Jazz Improvisation (1).** Prerequisite, permission of the instructor. Designed to give public school choral directors knowledge of the techniques, styles and pedagogical approaches to improvisation in a vocal jazz idiom.
- MUS 557. Vocal Jazz Styles (1).** Prerequisite, permission of the instructor. Designed to give Jazz Music Educators a knowledge of the styles currently used in jazz choirs and teaching strategies for directing jazz choirs in public schools.
- MUS 558. Survey of Solo Vocal Literature (3).** Prerequisite, permission of instructor. All periods, performance or listening. Background, stylistic traits and performance concepts of the Art Song.
- MUS 560. Instructional Development in Music Education (3).** Curriculum design, learning styles, rehearsal and classroom management, and current trends impacting music education.
- MUS 561. Opera Workshop (1-2).** A class leading to the performance of scenes or single acts from opera. May be repeated for credit. By permission of instructor.
- MUS 562. Opera Production (1-2).** A class leading to performance of a complete opera. May be repeated for credit. By permission of instructor. MUS 562 and MUS 462 are equivalent courses. Students may not receive credit for both.
- MUS 564. Major Applied Study (1, 2, 4).** By permission of instructor. May be repeated for credit. One half-hour lesson per week for 2 credits; one hour lesson per week for 4 credits; 1 credit if offered one term only during summer session. All students enrolled in lessons will register for the weekly recital hour. Instruction available in performance areas A-I. Open to non-Performance and non-Performance Pedagogy majors.
- MUS 565. Reading Big Band (1).** Prerequisite, permission of the instructor. Designed to give Jazz Music Educators experience playing in a big band and acquaintance with big band arrangers, composers, and arrangements of various levels of difficulty.
- MUS 566. Wind Ensemble (1-2).** May be repeated for credit. Open to students with demonstrated proficiency on band instruments by audition or permission of the instructor. Five hours rehearsal per week plus all scheduled rehearsals and performances. For graduate students. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate students.
- MUS 567. University Choir (1-2).** May be repeated for credit. For graduate students. See MUS 267 for description. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate students.
- MUS 568. Chamber Choir (2).** May be repeated for credit. See MUS 268 for complete description.
- MUS 569. Reading Vocal Jazz Choir (1).** Prerequisites, permission of the instructor. Designed to give Jazz Music Educators experience singing in a jazz choir, acquaintance with arrangers, composers, repertoire and rehearsal techniques.
- MUS 570. History of Vocal Art (3).** Prerequisite, permission of the instructor.
- MUS 571. History of Orchestra Music (3).** Forms and styles from the 17th to 20th centuries.
- MUS 572. Music in the Twentieth Century (3).** Forms and styles relevant to 20th century music.
- MUS 573. History of Opera (3).**
- MUS 575. History of Chamber Music (3).** Forms and styles from the late 16th century to the present.
- MUS 576. History of Choral Music (3).** Forms and styles from medieval to modern.
- MUS 577. Orchestra (1-2).** May be repeated for credit. Open to all students proficient on orchestral instruments by permission of director. Five hours rehearsal per week plus all scheduled rehearsals and performances. Two credits normally offered during academic year and one credit if offered one term only during summer session. For graduate students.
- MUS 579. Aesthetics of Music (3).** Examination of various perspectives in the meaning and value of music.
- MUS 582. Instrumental Administration Techniques (3).** How to administer, organize and evaluate the instrumental music program. To include testing, recruitment, grading and evaluation, handling equipment-materials-supplies, budgets and purchases, scheduling and public relations. For students who have had at least one year of teaching experience.

MUS 583. Supervision of Public School Music (3). Prerequisite, B.A. degree with major in music education.

MUS 584. Choral Composition and Arranging I (3). Prerequisite, MUS 246 and MUS 282. Practical part writing for the church and public school choral director; structure, texture, and styles; class performance. Formerly MUS 292.1. Students may not receive credit for both.

MUS 585. Band Arranging II (3). Prerequisite, MUS 484.

MUS 587. Marching and Concert Band (1-2). Fall quarter only. See MUS 287 for description. For graduate students. May be repeated for credit.

MUS 588. Symphonic Band (2). See MUS 288 for description. May be repeated for credit. For graduate students.

MUS 589. Harmonic Analysis (3). Prerequisites, MUS 246, 282. Survey of all harmonic forms, analysis of harmonic content.

MUS 592. Accompanying Practicum (1-3). May be repeated for credit. By assignment of instructor. Minimum 3 hours rehearsal weekly per credit plus performances. For graduate students.

MUS 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

MUS 598. Special Topics (1-6).

MUS 599. Seminar (1-5). May be repeated.

MUS 610. Graduate Seminar in Music: Composer (1-3). Prerequisite, Graduate standing and permission of instructor. Study of a particular composer's life and works. Offered according to needs of students and faculty availability.

MUS 611. Graduate Seminar in Music: Music Education (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music Education, offered according to needs of students and faculty availability.

MUS 612. Graduate Seminar in Music: Music History/Literature (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music History and Literature, offered according to needs of students and faculty availability.

MUS 613. Graduate Seminar in Music: Music Theory/Composition (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Music Theory and/or Composition, offered according to needs of students and faculty availability.

MUS 614. Graduate Seminar in Music: Performance (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Performance Studies, offered according to needs of students and faculty availability. May not be substituted for applied study.

MUS 615. Graduate Seminar in Music: Conducting (1-3). Prerequisites, Graduate standing and permission of instructor. Seminar in Conducting, offered according to needs of students and faculty availability.

MUS 664. Major Applied Area (Individual Instruction) (1, 2, 4). By permission of instructor. May be repeated for credit. One half-hour lesson per week for 2 credits; one hour lesson per week for 4 credits; 1 credit if offered one term only during summer session. All students enrolled in performance will register for the weekly recital hour. Instruction available in performance areas A-I. Intended for Performance and Performance-Pedagogy majors.

MUS 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

Graduate Courses on Reserve

The following courses are on reserve and may be offered subject to program needs:

MUS 530. Keyboard Music Through 1750 (3); MUS 534. Central Swingers (1); MUS 551. Accompaniment and Song (2).

OCCUPATIONAL EDUCATION

Faculty

Jan Bowers, Family and Consumer Science
Bob Wieking, Industrial Education Technology
Robert Lupton, Administrative Management and Business Education

Graduate Courses in Occupational Education

OCED 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals.

OCED 540. Advanced Total Quality Learning (3). Prerequisite, OCED 440. In-depth theory and philosophy of TQL concepts. Statistical process control tools, integrated project analysis, resource matrix chart, systems analysis, profound knowledge and brain theory.

OCED 551. Principles of Occupational Education (3). Formerly BSED 551. Students may not receive credit for both.

OCED 561. Administration of Occupational Education (3). The study of occupational needs, survey federal laws, state plans, finance, advisory committees, organization of programs and staffing. BSED/FCSE /IET 561 are the same course. Student may receive credit for one.

OCED 562. Vocational Finance (3).

OCED 563. Partnerships and Advisory Committees (3).

ORGANIZATION DEVELOPMENT

Program Director:

Anthony J. Stahelski
Professor of Psychology
Psychology Building 453

Professors

Stephen B. Schepman, Professor of Business Administration and Psychology, Organization Development, Organizational Behavior, Human Resource Management
Anthony J. Stahelski, Professor of Psychology, Organization Development, Social Psychology, Small Group Interaction

General Departmental Information

The objective of the Master of Science, Organization Development (MSOD) program is to prepare students for improving productivity and quality of work life in a variety of public and private sector organizational settings. The MSOD program is based in the Psychology Department with interdisciplinary connections to the College of Business.

The program is designed for working adults. The program is offered on the main campus in Ellensburg. Most students come from management positions in many types of public and private sector organizations across Washington and the Northwest. Required courses are scheduled across 24 weekends spread over two academic years. A "weekend" is defined as Friday evening, all day Saturday and all day Sunday. In addition to the courses taken during the two academic years, students take a course during the summer, in between the first and second years. Students arrange additional time on campus as required. Students using faculty time, supplies, and/or equipment for research either during the academic year or during the summer, must be registered for OD 595 or OD 700.

Success in the second year of the MSOD program is dependent on the knowledge and skills gained in the first year MSOD classes.

Therefore students need to remove any incompletes they receive in first year courses before enrolling in second year courses.

Admission Requirements

In addition to the university's general regulations for admission to Master's programs, admission to the MSOD program will be recommended upon the evaluation of the applicant's prior scholastic record, GRE or GMAT scores, three recommendations from previous instructors or employers, and a statement of professional objectives. An interview is part of the admission process. Since this program is heavily oriented toward the application of theory to practical affairs, most applicants submit a letter of endorsement from an organization willing to sponsor them. The sponsor is asked to participate in the learning process by providing a site for the student to practice course knowledge and skills, and to conduct thesis or project research. This letter is submitted to the Office of Admissions with other application materials.

For additional information about the MSOD program, please refer to our Web site, <http://www.cwu.edu/~msod/>

Master of Science

Required Courses	Credits
OD 515, Organizations	5
OD 520, Organization Change and Development	4
OD 551, Organizational Behavior Analysis	5
OD 560, Models of Planned Change	4
OD 562, Consulting in Organizations	4
OD 566, Organization Research and Assessment	5
OD 570, Organizational Planning and Strategy Simulation	5
OD 575, Process Control Methods	4
OD 590, Supervised Field Experience in Organization Development	6-12
OD 700, Thesis, Project and/or Examination	6
PSY 510, Group Process and Team Building	5
PSY 540, Psychology Applied to Work	5

Total 58-64

Graduate Courses in Organization Development

- OD 515. Organizations (5).** Modern theories of organization in the context of organization/environment interaction and adaptation.
- OD 520. Organization Change and Development (4).** An introduction to and overview of the field of organization development.
- OD 551. Organizational Behavior Analysis (5).** Applications of the principles and

methods of behavior analysis to the work environment.

- OD 560. Models of Planned Change (4).** Examination of classical and contemporary change theories as they relate to the phases of planned change in representative organizations; development of individual models of organizational improvement.
- OD 562. Consulting in Organizations (4).** Attainment of competence in the role of an external consultant to an organization.
- OD 566. Organization Research and Assessment (5).** Principles of scientific research, methodology and their application to the analysis of organizations.
- OD 570. Organizational Planning and Strategy Simulation (5).** The application of management and organization development skills to a variety of organizational problems in a computer simulation.
- OD 575. Process Control Methods (4).** Apply logical and statistical process control and other numerical tools to the identification of and solution to organizational problems.
- OD 580. Current Issues in Organization Development (3).**
- OD 590. Supervised Field Experience in Organization Development (3).** Application of theories and concepts of OD to actual organizations. May be repeated for credit. Grade will be S or U.
- OD 595. Graduate Research (1-10).** Design and conduct an approved organization research project. Normally, the research will be non-thesis related. However, students using faculty time, supplies and/or equipment for thesis work beyond the maximum allotted six credits of OD 700 must be enrolled for at least three credits of OD 595. A maximum of 10 credits of OD 595 may be included on the student's Master's degree Course of Study.
- OD 596. Individual Study (1-6).** Prerequisite, permission of instructor. Contracted learning under the supervision of faculty.
- OD 598. Special Topics (1-6).** Student and faculty initiated courses. Topics are published in the quarterly class schedule.
- OD 684. Internship in Organization Development (3-9).** Prerequisite, permission of MSOD program director. Application of theories and concepts of OD to actual organizations. Grade will be S or U. May be repeated for credit.
- OD 700. Thesis, Project and/or Examination (1-6).** Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's project or thesis. Grade will be either S or U. May be repeated for up to 6 credits.

PHILOSOPHY

Graduate Faculty
Chair: Chenyang Li
Language & Literature 337

Professors
 Peter M. Burkholder, Ethics, Epistemology, Modern Philosophy
 Webster F. Hood, Existentialism, Applied Logic, Philosophy of Technology
 Chenyang Li, Asian Philosophy, Comparative Philosophy, Ethics, and Philosophy of Language

Assistant Professors
 Jeffrey Dippmann, Asian Religion and Philosophy, World Religions, Chinese Religion, Buddhist and Taoist Philosophy.
 Heidi Szpek, Hebrew Bible, Western Religious Tradition, World Religion, Ancient Studies and the Bible.

Emeritus Professors
 Jay E. Bachrach
 Raeburne S. Heimbeck

General Departmental Information

The Philosophy Department does not offer any graduate degrees.

Graduate Courses in Philosophy

- PHIL 503. Philosophy of Education (3).** Various philosophic positions which lead to an understanding of the educational enterprise. PHIL 503 and EDF 503 are equivalent courses. Student may not receive credit for both.
- PHIL 596. Individual Studies (1-6).** Prerequisites: Graduate students or seniors, GPA of 3.0 in philosophy and a cumulative GPA of 3.0 plus approval of the instructor and Chair of the Department.
- PHIL 598. Special Topics (1-6).**
- RELS 596. Individual Studies (1-6).** Prerequisites: Graduate students or seniors, GPA of 3.0 in philosophy and a cumulative GPA of 3.0 plus approval of the instructor and Chair of the Department.

PHYSICS

Graduate Faculty
Chair: Bruce Palmquist
Lind Hall 201A

Associate Professor
Bruce C. Palmquist, Physics and Science
Education

General Departmental Information

The Physics Department does not offer any graduate degrees.

Graduate Courses in Physics

PHYS 595. Directed Research (1-5). Prerequisite, permission of instructor.

POLITICAL SCIENCE

Graduate Faculty
Chair: James R. Brown, Jr.
Psychology Building 414

Professors
Robert C. Jacobs, Public Law and
Government, American Politics, Constitutional Law, American Presidency
Rex Wirth, Public Administration and Public Policy, International Politics, Western Europe
Michael A. Launius, Comparative Politics, Asian Politics, International Political Economy, Pacific Rim Studies

General Departmental Information

The Political Science Department does not offer any graduate courses or graduate degrees.



PSYCHOLOGY

Graduate Faculty
Chair: Warren R. Street
Psychology 421

Professors
Terry L. DeVietti, Physiological Psychology, Experimental
James L. Eubanks, Organization Development, Performance Management and Training, General Experimental
Roger S. Fouts, General Experimental, Language Acquisition, Primate Behavior, Comparative Psychology
Eugene R. Johnson, School Psychology, Psychological and Educational Evaluation, Exceptional Children
Susan D. Lonborg, Counseling Psychology, Psychotherapy Research, Psychology of Women, Substance Abuse, Sports Psychology
Wayne S. Quirk, Sensation and Perception, Neuroscience
Stephen B. Schepman, Organization Development, Work Motivation, Personality Theories
John L. Silva, Emeritus, Clinical, Counseling, Testing
Anthony J. Stahelski, Organization Development, Social Psychology, Small Group Interaction
Stephanie Stein, School Psychology, Behavior Disorders in Children, Lifespan Development, Psychopathology
Elizabeth M. Street, Educational Psychology, Learning Theory, Exceptional Children, Behavior Analysis
Warren R. Street, Social Psychology, History of Psychology, General Experimental, Computer Methods
Philip Tolin, Sensation and Perception, Human Factors, Experimental
Lisa L. Weyandt, School Psychology, Developmental Neuropsychology, Attention Deficit Hyperactivity Disorder

Associate Professors
W. Owen Dugmore, Counseling, Psychology of Adjustment
Marte Fallshore, Human Learning and Memory; Development of Expertise, Statistics, Cognition, Humor
Jeffrey M. Penick, Counseling Psychology, Health Psychology, Adult Development
Terrence J. Schwartz, Educational Psychology, Counseling Psychology
Wendy A. Williams, General Experimental, Operant Conditioning, Animal Behavior

Assistant Professors
Neal A. Bowen, Multicultural Counseling, Treatment of Trauma, Migration Issues
J. Phillip Diaz, School Psychology, Educational Psychology, Pediatric Neuropsychology

Andrew M. Downs, Counseling Psychology, Disorders of Childhood
Megan D. Matheson, General Experimental, Primate Behavior, and Comparative Psychology

General Departmental Information

The Department of Psychology offers courses of study leading to the Master of Science degree in Experimental Psychology, Counseling Psychology, and Organization Development (see separate program listing) and to the Master of Education Degree in School Counseling and School Psychology. For students already holding the Master's degree, certification-only programs are offered in School Counseling and School Psychology. More information about our graduate program is available on our Web site, www.cwu.edu/~psych.

Admission Requirements

Admission to these programs is based on evaluation of the student's prior scholastic record; verbal and quantitative scores on the Graduate Record Examination; recommendations by instructors and/or employers; a statement of professional objectives; and, where appropriate, the applicant's potential to succeed in required practica and internships. If prerequisite background courses or their equivalents have not already been completed, they must be taken as soon as possible. Courses will not be accepted as meeting program prerequisites if taken on a credit/no-credit basis.

Each student is required to file a Course of Study form with the Office of Graduate Studies, Research and Continuing Education. The Course of Study is structured in consultation with the student's academic advisor and is approved by the Department Chair. The student is expected to complete at least 30 credits after full admission to the program.

Students who wish to use faculty time or departmental resources for completion of thesis work must register for at least two (2) credits of PSY 595 or PSY 700 during each quarter in which they require assistance and resources. Students must be registered for two (2) credits of PSY 595 or PSY 700 during the quarter in which the final thesis defense is held.

Background Check and Liability Insurance. Students admitted to the Counseling, School Counseling, or School Psychology programs will be required to have on file a completed, current background and fingerprint check. Also, in order to enroll in clinical training courses (practicum or internship), a student must arrange to purchase individual professional liability insurance. More information

regarding procedures, costs, and types of insurance coverage available may be obtained from the Department Chair or Program Director.

Practica and Internships. Satisfactory completion of all required practica and internships is mandatory for retention in all degree and certification programs. Grades assigned in these courses are S/U.

Final Examination. Candidates for the Master's degree must pass an oral final examination on work offered for the degree. This examination will include a presentation and defense of the thesis and may include a review of courses completed in the student's area of specialization.

**Master of Science
Specialization: Experimental
Psychology**

**Program Coordinator: Warren R. Street
Psychology 421**

The Experimental Psychology specialization reflects our commitment to provide students with a generalized background in experimental psychology while allowing them to concentrate in areas of study adequately represented among the faculty. These areas currently include Industrial/Organizational Psychology, Primate Behavior, Educational Psychology, and Animal Behavior. It may also be possible to develop curricular tracks in other areas of psychology and/or interdisciplinary programs; however, to be sure that a curriculum can be developed that meets the student's needs, it should be planned in consultation with a faculty advisor prior to enrollment in the program.

Upon enrolling, students will meet with their faculty advisors to discuss objectives and to establish a research plan. Collaborative research is encouraged, beginning with a first-year research project developed in conjunction with the advisor. This research project may lead to the student's Master's thesis in the second year.

Prerequisites: PSY 301, 362, 363, 461 (or approved equivalents). Prerequisite courses may be taken concurrently with certain program courses.

Required Courses	Credits
PSY 550, Research in Natural Environments	4
PSY 555, Design and Analysis for Applied Research	4
PSY 558, Advanced Statistics	5
PSY 562, Issues in Learning and Memory	5
PSY 576, Comparative Psychology	4
PSY 588, Physiological Psychology	4
PSY 700, Thesis	6
Subtotal	32

Choose by advisement one of the following:

General Experimental Emphasis

- PSY 551, Behavior Analysis (4)
- PSY 580, Current Issues in Psychology (3)
- PSY 595, Graduate Research (3-10)
- Approved electives (11-18)

OR

**Industrial/Organizational
Emphasis:**

- PSY 510, Social Psychology of Small Group Behavior (5)
- PSY 540, Psychology Applied to Work (5)
- OD 551, Organizational Behavior Analysis (5)
- OD 562, Consulting in Organizations (4)
- OD 580, Current Issues in Organization Development (3)
- PSY 595, Graduate Research (3-10)
- Approved electives (1-5)

OR

Electives, with advisement, in approved areas of concentration (28 credits).

Specialization Total 60

**Specialization: Counseling
Psychology**

**Program Coordinator:
Jeffrey M. Penick
Psychology 461**

The M.S. program in Counseling Psychology trains mental health professionals for careers in a variety of settings. The orientation of the program is eclectic, with particular emphasis on those active counseling skills which are appropriate to short-term counseling. In addition, the program's scientist-practitioner emphasis may be useful to those students interested in pursuing doctoral study.

The student shall complete an approved Course of Study filed with Graduate Studies and Research which will normally consist of the courses below.

Prerequisites: PSY 362, 363, and 461 (or approved equivalent). Prerequisite courses may be taken concurrently with certain program courses. Please note the background check and liability insurance requirements described in the general departmental information section.

Required Courses	Credits
PSY 502, Professional Orientation:	
Mental Health Counseling	2
PSY 544, Tests and Measurements	4

PSY 551, Behavior Analysis	4
PSY 552, Human Growth and Development, Advanced	3
PSY 555, Design and Analysis for Applied Research	4
**PSY 560, Introduction to Counseling	4
PSY 561, Group Counseling	3
PSY 567, Counseling and Assessment: Children and Adolescents	5
PSY 568, Counseling and Assessment Strategies: Adults	5
PSY 571, Counseling for Relationships and Families	4
PSY 573, Career Development and Counseling	4
PSY 574, Multicultural Counseling	3
PSY 584, Behavior Disorders and Psychopathology	4
PSY 588, Physiological Psychology	4
**PSY 593A, Practicum in Counseling I: Interviewing	4
PSY 593B, Practicum in Counseling II: Assessment	4
PSY 593C, Practicum in Counseling III: Advanced	4
PSY 593E, Practicum in Counseling V: Group	3
PSY 589, Professional and Ethical Issues	4
*PSY 684, Counseling Internship	12
PSY 700, Thesis	6

Total 90

*Students who take the M.S. degree and also seek school counseling certification must complete the internship requirement (PSY 684) and, in addition, must take 15 hours of PSY 685 in a school setting. Students who take the Master of Science (M.S.) degree and also seek School Psychology certification must complete an internship in Counseling (PSY 684) and in School Psychology (PSY 683). Other courses required for certification in School Counseling or School Psychology will be determined through individual assessment.

**PSY 560 and 593A are taken concurrently. Successful completion of PSY 560 and 593A is required for final admission to the Counseling Psychology Program.

**Master of Education and/or
Certification in School
Counseling, and School
Psychology
Specialization: School
Counseling**

**Interim Director:
Jeff Penick
Psychology 461**

The M.Ed. and certification programs in School Counseling train specialists to provide individual and group counseling in the schools and to consult with parents and

teachers concerning the social, educational, and developmental tasks of children and youth.

The State Board of Education's standards for certification of school counselors require that the candidate complete an approved graduate program in counseling which has been developed in consort with school and professional organizations. Central Washington University is affiliated with an Educational Staff Associate (ESA) Professional Education Advisory Board for the preparation of school counselors. The program emphasizes supervised practicum and field experiences. Upon completion of the program, the individual will be qualified for the initial level certificate as a school counselor in the State of Washington.

Candidates for initial certification generally follow the two-year program leading to the Master of Education degree in School Counseling. It is possible to obtain certification without becoming a candidate for the M.Ed. degree. The latter is recommended for those persons who have earned or are earning Master's or Doctoral degrees in such allied disciplines as Education, Special Education, Counseling, Speech Pathology and Sociology. For those candidates seeking the degree in School Counseling, the courses listed are required. Those who desire to meet certification requirements in School Counseling and who already hold a Master's degree, must complete the courses listed below (or equivalents) with the exception of the thesis. The certification program also requires satisfactory completion of a comprehensive examination.

Prerequisites: PSY 362, 363 (or approved equivalents) may be taken concurrently with certain program courses. Please note the background check and liability insurance requirements described in the general departmental information section.

Required Courses	Credits
PSY 503, Proseminar in School Counseling	3
PSY 544, Tests and Measurements	4
PSY 551, Behavior Analysis	4
PSY 552, Human Growth and Development, Advanced	3
PSY 555, Design and Analysis for Applied Research (in lieu of EDF 510)	4
PSY 559, Advanced Educational Psychology	4
*PSY 560, Introduction to Counseling	4
PSY 561, Group Counseling	3
PSY 567, Counseling and Assessment: Children and Adolescents	5
PSY 569, Administering School Counseling Programs	4
PSY 571, Counseling for Relationships and Families	4
PSY 573, Career Development and Counseling	4
PSY 574, Multicultural Counseling	3

PSY 584, Behavior Disorders and Psychopathology	4
PSY 589, Professional and Ethical Issues	4
*PSY 593A, Practicum in Counseling I: Interviewing	4
PSY 593B, Practicum in Counseling II: Assessment	4
PSY 593C, Practicum in Counseling III: Advanced	4
PSY 593E, Practicum in Counseling V: Group	3
PSY 682, School Counseling Internship	12
PSY 700, Thesis	6

Total 90

*PSY 560 and 593A are taken concurrently. Successful completion of PSY 560 and 593A is required for final admission to the school counseling program.

Specialization: School Psychology

Program Coordinator:
Eugene R. Johnson
Psychology 118

The State Board of Education's standards for certification of School Psychologists require that the candidate complete an approved Master's degree program in psychology that has been developed in consort with school and professional organizations. (Note: Candidates who have already received a Master's degree in a related field are not required to earn a second Master's, but must complete all requirements or their equivalent.) Successful completion of the preparation program at Central Washington University leads to eligibility for initial certification as an Educational Staff Associate-School Psychologist and national certification through the National Association of School Psychologists.

Prerequisites: PSY 362, PSY 363, (or approved equivalents) may be taken concurrently with certain program courses.

Master's Degree Requirements

The Master of Education degree in School Psychology is granted to the candidate upon completion of 101 quarter hours of coursework including thesis. The following courses (or approved equivalents) are required:

Required Courses	Credits
EDF 507, Studies & Problems in Intercultural Education	3
EDSE 523, Curriculum for Students with Special Needs	3
EDRD/PSY 525, Psychology of Reading	3
PSY 501, Professional Seminar in School Psychology	3
PSY 551, Behavior Analysis	4

PSY 552, Human Growth and Development, Advanced	3
PSY 555, Design Analysis for Applied Research (in lieu of EDF 510)	4
PSY 556, Advanced Evaluative Techniques	5
PSY 558, Advanced Statistics	5
PSY 559, Advanced Educational Psychology	4
*PSY 560, Introduction to Counseling	4
PSY 561, Group Counseling	3
PSY 564, Intellectual Assessment	5
PSY 566, Personality Assessment	5
PSY 573, Career Development and Counseling	4
PSY 583, Consultation	3
PSY 584, Behavior Disorders and Psychopathology	4
PSY 588, Physiological Psychology	4
PSY 592A, Practicum in School Psychology	3
PSY 592B, Practicum in School Psychology	3
*PSY 593A, Practicum in Counseling I: Interviewing	4
PSY 593B, Practicum in Counseling II: Assessment	4
PSY 683, School Psychology Internship (one public school year, minimum 1,200 clock hours)	12
PSY 700, Thesis	6

Total Credits for M.Ed and Certification 101

*PSY 560 and 593A are taken concurrently. Successful completion of PSY 560 and 593A is required for final admission to the school counseling program.

Graduate Courses in Psychology

PSY 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

PSY 501. Professional Seminar in School Psychology (3). Prerequisite, admission to the school psychology program or permission of instructor. An introduction to the activities of school psychologists and the conditions under which they function.

PSY 502. Professional Orientation: Mental Health Counseling (2). Prerequisite: admission to graduate program in Counseling Psychology or permission of the instructor. Professional identity in mental health counseling. Roles and functions of mental health counselors, professional organizations, credentialing and accreditation, practices and standards. May be repeated for a total of four credits.

PSY 503. Proseminar in School Counseling (3). Prerequisite, permission of the instructor. Introduction to role of the

- school counselor; comprehensive, developmental guidance and counseling programs; interagency collaboration; current professional issues in school counseling.
- PSY 510. Group Processes and Team Building (5).** Exploration of small group behavior with an emphasis on how groups work as teams.
- PSY 525. Psychology of Reading (3).** Prerequisites, a reading methods course, a basic psychology of learning course, or permission of the instructor. Principles of learning and readiness, perception, psychological, and physiological aspects of reading. PSY 525 and ED 525 are equivalent courses. Students may not receive credit for both.
- PSY 540. Psychology Applied to Work (5).** Application of psychological principles to organizational issues.
- PSY 542. Evolutionary Psychology (4).** Application of the principles of evolution by natural selection to the understanding of human and nonhuman behavior and cognition. PSY 542 and PSY 442 are equivalent courses with additional assignments for graduate students. Students may not receive credit for both.
- PSY 544. Tests and Measurements (4).** Prerequisite, PSY 315 or PSY 362. Psychological and educational tests, theory and practice. PSY 544 and PSY 444 are equivalent courses. Students may not receive credit for both.
- PSY 550. Research in Natural Environments (4).** A seminar in describing behavior, developing questions, designing procedures and analyzing data that address applied and naturalistic research situations.
- PSY 551. Behavior Analysis (4).** Techniques in applying behavioral principles to human performance.
- PSY 552. Human Growth and Development, Advanced (3).** Prerequisite, PSY 313, 314, or permission of instructor. Developmental theories, multicultural differences, exceptionality, related research, and implications for education and guidance.
- PSY 555. Design and Analysis for Applied Research (4).** Prerequisite, PSY 363 or equivalent. Design and analysis of experimental and quasi-experimental research, with an emphasis on applied settings.
- PSY 556. Advanced Evaluative Techniques (5).** Prerequisite, PSY 444 and admission to the school psychology program. Evaluation procedures and assessment devices for use with children and adolescents, emphasizing variables affecting test performance, interpretation and report writing.
- PSY 558. Advanced Statistics (5).** Prerequisite, PSY 555. Advanced topics in analysis of variance and introduction to multiple regression, factor analysis and MANOVA.
- PSY 559. Advanced Educational Psychology (4).** Prerequisite, PSY 315 or permission of instructor. Investigation of principles of learning and behavior as it relates to educational situations, including major theories of learning and development and assessment/evaluation procedures.
- PSY 560. Introduction to Counseling (4).** Prerequisite, admission to the graduate programs in Counseling Psychology, School Counseling, or School Psychology. Introduction to counseling theories and practice.
- PSY 561. Group Counseling (3).** Prerequisite, PSY 560. Theoretical approaches to group counseling, and introductory laboratory/ demonstration experience.
- PSY 562. Issues in Learning and Memory (5).** Prerequisite, PSY 301 or permission of instructor.
- PSY 564. Intellectual Assessment (5).** Prerequisite, PSY 444 and admission to the school psychology program. Administration of intellectual assessment instruments, early childhood through adult. Variables affecting test performance, interpretation and report writing are emphasized.
- PSY 565. Advanced Animal Behavior (5).** Advanced knowledge in the study of animal behavior. Three hours lecture, two hours laboratory, one hour independent study per week. PSY 565 and BIOL 465/565 are equivalent courses. Students may not receive credit for both PSY 565 and either BIOL 565 and BIOL 465.
- PSY 566. Personality Assessment (5).** Prerequisite, PSY 444 and admission to the school psychology program. Attainment of competencies in the use of personality assessment instruments, childhood through adult.
- PSY 567. Counseling and Assessment: Children and Adolescents (5).** Prerequisites, PSY 560 and PSY 593A. Basic counseling assessment and treatment strategies for common problems presented by child and adolescent clients.
- PSY 568. Counseling and Assessment Strategies for Adults (5).** Prerequisite, PSY 560 and PSY 593A. Basic counseling assessment and treatment strategies for common problems presented by adult clients.
- PSY 569. Administering School Counseling Programs (4).** Prerequisite, PSY 503 or permission of the instructor. Strategies for developing, implementing, and evaluating comprehensive school counseling programs; counselor's role in issues such as school climate, school safety, and school crisis information.
- PSY 571. Counseling for Relationships and Families (4).** Prerequisites, PSY 560 or permission of instructor. Major theoretical approaches to counseling with couples and families.
- PSY 573. Career Development and Counseling (4).** Prerequisite permission of instructor. Major theories of career development; career assessment; and career intervention, emphasizing individual, ethnic, and cultural differences..
- PSY 574. Multicultural Counseling (3).** Prerequisite, permission of instructor. Multicultural counseling theories and implications for research, training, and practice.
- PSY 576. Comparative Psychology (4).** Prerequisite, permission of instructor. Invertebrates and vertebrates; laboratory and field observation.
- PSY 579. Human Factors (4).** Psychological principles in the design of equipment and environments.
- PSY 580. Current Issues in Psychology (3).** May be repeated.
- PSY 583. Consultation (3).** Role of the consultant, stages of consultation, application of consultation principles to school and mental health settings.
- PSY 584. Behavior Disorders and Psychopathology (4).** Prerequisite, PSY 449 or permission of instructor. Major systems of classification for normal and abnormal child/adult behavior.
- PSY 588. Physiological Psychology (4).** Prerequisite, BIOL 201 or permission of instructor. Problems, methods and techniques of neurophysiology and the physiology of human and infrahuman behavior patterns. PSY 588 and PSY 478 are equivalent courses. Additional requirements for PSY 588. Students may not receive credit for both.
- PSY 589. Professional and Ethical Issues (4).** Prerequisite, PSY 593A. Professional, ethical and legal issues for mental health and school counselors. Formerly PSY 599.1. Students may not receive credit for both.
- PSY 591. Workshop (1-6).**
- PSY 592A. Practicum in School Psychology (3).** Prerequisite, admission to the school psychology program. Attainment of competence in the use of observational techniques, anecdotal reports, rating scales, behavioral analyses, and developmental interviews. Formerly PSY 592.1. Students may not receive credit for both. Grade will be S or U.
- PSY 592B. Practicum in School Psychology (3).** Prerequisite, PSY 592A. Experience in

complete case workups within state and federal requirements. Includes assessments, interpretation of results, treatment plans and educational programs. Emphasis on developing consultation skills. May be repeated for credit. Formerly PSY 592.2. Students may not receive credit for both. Grade will be S or U.

PSY 593A. Practicum in Counseling I: Interviewing (4). Prerequisite, admission to graduate programs in Counseling Psychology, School Counseling, or School Psychology and permission of Department Chair. To be taken concurrently with PSY 560. Interviews, role-playing, observation, and analysis of interview behavior. Grade will be S or U. May be repeated. A maximum of 4 credits may be included on the Course of Study on the Master's degree.

PSY 593B. Practicum in Counseling II: Assessment (4). Prerequisites, PSY 551 (may be taken concurrently), PSY 560, 593A and permission of Department Chair. Assess client problems, set goals, and plan counseling strategies. Grade will be S or U.

PSY 593C. Practicum in Counseling III: Advanced (4). Prerequisites, PSY 593B and permission of Department Chair. Implementation of counseling strategies with children, adults, couples or families. Grade will be S or U.

PSY 593D. Practicum in Counseling IV: Advanced (1-4). Prerequisites, PSY 567, PSY 571, and PSY 593C (all may be taken concurrently) and permission of the Department Chair. Implementation and evaluation of counseling with children, adults, couples or families. Grade will be S or U.

PSY 593E. Practicum in Counseling V: Group (3). Prerequisites, PSY 561, PSY 593B and permission of Department Chair. Supervised counseling of child or adult groups. Grade will be S or U.

PSY 594A. Supervised Field Experience in School Psychology (3). Prerequisite, graduate status in school psychology. Formerly PSY 594.1. Students may not receive credit for both.

PSY 594B. Supervised Field Experience in School Psychology (3). Prerequisite, graduate status in school psychology. Formerly PSY 594.2. Students may not receive credit for both.

PSY 594C. Supervised Field Experience in School Psychology (3). Prerequisite, graduate status in school psychology. Formerly PSY 594.3. Students may not receive credit for both.

PSY 595. Graduate Research (1-10). For students working on library research, thesis proposal, and collection of data

prior to writing a thesis. Students using faculty time, supplies and/or equipment for thesis work must be registered for PSY 595 or PSY 700. May be repeated for credit. Maximum of 10 credits may be included on Course of Study for the Master's degree.

PSY 596. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated.

PSY 597. Supervised Field Experience in Counseling (3). Prerequisite, advanced status in counseling options or advanced degree in counseling or equivalent. Grade will be S or U. May be repeated.

PSY 598. Special Topics (1-5).

PSY 599. Seminar (1-5). May be repeated.

PSY 681. Mental Health Internship (3-12). Prerequisite, PSY 593C, PSY 593E, PSY 584 and permission of Department Chair. Full-time internship placement in a mental health agency or psychiatric hospital. Grade will be S or U.

PSY 682. School Counseling Internship (12). Prerequisite, PSY 593C and PSY 593E and permission of Department Chair. Placement in the public schools (K-12). Grade will be S or U.

PSY 683. School Psychology Internship (5-15). Prerequisite, permission of Department Chair. A full-time placement in school district (K-12). Grade will be S or U.

PSY 693. Supervision in School Psychology Practicum (1-6). Prerequisite, PSY 592B or equivalent and Department Chair approval. May be repeated. Training in the supervision of preparatory and initial level school psychology trainees.

PSY 694. Supervision in Counseling Practicum (1-6). Prerequisites, PSY 593B or equivalent and Department Chair approval. May be repeated. Training in the supervision of beginning and paraprofessional counselors.

PSY 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

RESOURCE MANAGEMENT

Graduate Faculty Program Coordinators:

Natural Resources:

Dr. Anthony Gabriel, Department of Geography and Land Studies
Central Washington University
400 E 8th Ave, Lind 119
Ellensburg, WA 98926-7420
(509) 963-1188
e-mail: gabriela@cwu.edu

Cultural Resources:

Dr. Steven Hackenberger
Department of Anthropology
Central Washington University
400 E 8th Ave, Farrell 317
Ellensburg, WA 98926-7544
(509) 963-3201
e-mail: hackenbe@cwu.edu

Professors:

Donald J. Cocheba, Emeritus, Economics, Resource/Wildlife Economics
Anne S. Denman, Emeritus, Anthropology, American Culture
Steven Hackenberger, Anthropology, Cultural Resource Management, Cultural Ecology
Steven Hackenberger, Anthropology, Archaeology, Cultural Resource Management
David R. Hosford, Botany, Fungi in Forest Ecosystems, Mushroom Conservation
James L. Huckabay, Geography, Energy Resources, Aerial Photo Interpretation
Nancy Hultquist, Geography, GIS, Urban Geography, Computer Cartography
Paul James, Biology, Fisheries Management, Fish Ecology
David S. Kaufman, Sociology, Social Impacts of Resource Management, Demography
George Macinko, Emeritus, Geography, Resources and Man, Environmental Philosophy
Richard S. Mack, Economics, Resource and Regional Economics
Morris Uebelacker, Geography, Resources and Land Utilization Patterns, Cultural Resource Management
Rex Wirth, Political Science, Resource Policy in Developing Nations

Associate Professors:
Tracy J. Andrews, Anthropology, Sociocultural Anthropology, Ecological Anthropology, Ethnicity
Kathleen Barlow, Anthropology, Sociocultural Anthropology, Natural Resource Extraction
Loran E. Cutsinger, Anthropology, Cultural Anthropology
Kristina Ernest, Biology, Ecology, Wildlife Management
Anthony Gabriel, Geography, Biogeography, Lake and River Ecosystems, Coastal and Wetland Management, Pacific Northwest

Robert Hickey, Geography, GIS Remote Sensing, Environmental Impacts, Coastal Zones, Australia
 Robert Kuhlken, Geography, Land-use Planning, Cultural Ecology, Oceania
 Karl Lillquist, Geography, Physical Geography, Remote Sensing, Global Change, Arid Lands
 Patrick McCutcheon, Anthropology, Archaeology, Cultural Resource Management

Assistant Professor:

Christopher Kent, Geography, Physical Geography, Water Resources, Watershed Planning, North America
 Patrick Lubinski, Anthropology, Archaeology, Cultural Resource Management, Zooarchaeology
 Lene Pedersen, Anthropology, Sociocultural Anthropology, Environmental Anthropology
 Lori Sheeran, Anthropology, Biological Anthropology, Primatology
 Thomas Wellock, History, Environmental History, The American West, Nuclear Energy

*Faculty from other departments participate in the program as graduate committee members.

**Master of Science
 Resource Management**

Program. The program is interdisciplinary, emphasizing understanding of problems encountered in the management of both natural and cultural resources. It includes a basic core of 27 credits in resource management courses, courses in geographic information systems, and a specialty track in either natural resource areas (management of land, mineral, water, and energy resources) or cultural resources management (ethnographic and archaeological sites and materials, historic properties, and archives). An internship is recommended. Students must complete at least 60 credits as outlined in an approved Course of Study filed with Graduate Studies and Research. The Course of Study is selected by advisement before completing 25 credits.

Program Admission Requirements. In addition to general regulations for admission to Master's programs, applicants for admission must have the following qualifications:

A. A solid background in a discipline closely related to the resources they expect to manage. Normally, a bachelor's degree is required in a technical field such as one of the biological or physical sciences, geography, engineering, geology or earth sciences, oceanography, archaeology or ethnology, history or architecture. In some cases work experience may be accepted in lieu of a technical major. Before admission, program faculty will evaluate the academic

coursework and experience of all applicants for admission, and will recommend remedial coursework if, in their judgment, there are deficiencies in pre-baccalaureate work which need to be overcome before entrance into the program.

B. A high proficiency in written and spoken English as well as potential for post-graduate study and research. Evidence of proficiency and potential may include: GRE scores, samples of previous writing, letters of recommendation, an interview.

C. A good background in basic statistics (the equivalent of two quarters of undergraduate statistics), knowledge of microeconomic principles, and some knowledge of computer systems (the equivalent of a one-quarter undergraduate course).

Admission to the program and continuation in it may be conditional on the applicant's satisfactory completion of remedial courses. Such courses will not count toward the program credit requirement but in some cases they may be taken after admission to the program.

Required Core Courses	Credits
REM 501, Introduction to Resource Management	4
REM 502, Policy and Law in Resource Management	5
REM 505, Introduction to Graduate Research	3
REM 506, Resource Management Colloquium (1)	1,1
Must be repeated for 2 credits.	
REM 522, Resource Analysis	5
REM 562, Issues and Conflicts in Resource Management	3
Subtotal 22	
REM Course Requirements	
Core	22
Prerequisite: ECON 462 (5)	
Electives (to be selected by advisement):	
Natural Resource or Cultural Resource Management (minimum 15)	27
REM 700, Thesis	6
Total 60	

Graduate Committee. The student will have at least a three-member graduate committee, to be selected in consultation with the program coordinator and the Dean of Graduate Studies and Research.

Final Examination. Each candidate must pass a final oral examination on all phases of his or her program including the thesis and related coursework.

**Graduate Courses in
 Resource Management**

REM 501. Introduction to Resource Management (4). The nature of resources; traditional systems of resource management; problems associated with

resource "ownership"; principles and practice of management related to local, regional and global resources.

REM 502. Policy and Law in Resource Management (5). The scope and formation of U.S. resource policy, history of resource-related policies and legislation, current legislation and policies, future directions in resource policy.

REM 505. Introduction to Graduate Research (3). Prerequisite, permission of instructor. Discussion and application of research problem definition, research methods, literature review, and funding sources as applied to a research proposal.

REM 506. Resource Management Colloquium (1). This class is a seminar series for REM students to both observe and present relevant research. All REM students must take this class twice: once as an attendee, once as an attendee who must also present their research proposal. Grade will be S/U.

REM 515. GIS in Resource Management (3). Introduction to uses and management applications of Geographic Information Systems, with emphasis on discovering its utility as a technology for both natural and cultural resources.

REM 522. Resource Analysis (5). Prerequisite, ECON 462. Problems of resource allocation; techniques of resource determination, cost-benefit analysis, principles of systems analysis, politics of resource analysis, understanding the "planner" and the "developer."

REM 562. Issues and Conflicts in Resource Management (3). Current issues and problems in resource management.

REM 590. Internship (1-8). Prerequisite, approval of program coordinator. Supervised off-campus practical experience in accordance with a written agreement between student, faculty and cooperating agency. Grade will be S or U. May be repeated for credit.

REM 593. Resource Management Field Experience (1-8). Prerequisites, permission of instructor and program director. Off campus experience in the field study of resource management. May be repeated for credit.

REM 597. Graduate Research (1-10). May be repeated for credit.

REM 598. Special Topics (1-5).

REM 599. Seminar (1-3).

REM 700. Master's Thesis, Project Study and/or Examination (1-6). Prerequisite, permission of Chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's thesis, non-thesis project, studio project, public recital, and/or examination. Grade will be either S or U. May be repeated for up to 6 credits.

SCIENCE EDUCATION

Graduate Faculty
Program Coordinator:
 Martha J. Kurtz
 SCI 302F

Associate Professors
 Martha J. Kurtz, Chemistry and Science Education
 Bruce C. Palmquist, Physics and Science Education

Assistant Professor
 Ian J. Quitadamo, Biological Sciences and Science Education

General Departmental Information

The Master of Education, Science Education Program is on reserve and may be offered subject to program needs. Applications for the program are not being accepted at the present time. However, our faculty work closely with other programs on campus that do offer Master's degrees. It is possible to earn a Master's degree in another program (i.e., Master Teacher) with a focus on Science Education.

Graduate Courses in Science Education

SCED 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

SCED 598. Special Topics (1-5).

SOCIOLOGY

Graduate Faculty
Chair: Kirk Johnson
 Farrell 409

Professors
 Laura Appleton, Social Roles, Social Movements, Social Theory
 John R. Dugan, Statistics, Methodology, Social Psychology
 Charles L. McGehee, Social Psychology

Associate Professors
 Delores Cleary, Crime
 Nelson Pichardo, Ethnic Studies, Co-Society
 Nancy Wessel, Sociology of family, Child Abuse, Social Change

General Departmental Information

The Sociology Department does not offer any graduate degrees.

Graduate Courses in Sociology

SOC 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

SOC 525. Society and Education (3). Social and cultural trends that shape education and its future. Student may not receive credit for both SOC 425 and SOC 525.

SOC 566. Organization Research and Assessment (5). Prerequisite, introductory statistics or permission. Principles of scientific research, methodology and their application to the analysis of organizations. Same as OD 566. Student may not receive credit for both.

SOC 596. Individual Study (1-6). Prerequisite, permission of instructor.

SOC 598. Special Topics (1-6).

SOC 599. Seminar (1-5). May be repeated.

THEATRE ARTS

Graduate Faculty
Program Coordinator: George W. Bellah
 McConnell: 106

Professors
 Brenda J. Hubbard, Acting, Improvisation, Directing, Literature
 Wesley Van Tassel, Acting, Directing, Management, Literature

Associate Professor
 George W. Bellah, Department Chair and Graduate Coordinator, Combat, Movement, Acting, Directing
 Scott Robinson, Costume Design and Technology
 Michael J. Smith, Acting, Voice, Improvisation

Assistant Professors
 Christina Barrigan, Lighting Design and Technology
 Derek Lane, Scenic Design and Technology

Guest Faculty
 David Barnett, Technical Direction, Scene Technology
 Paulette Bond, Costume Technology, Costume Shop Management, Stage Makeup

Additional guest faculty is added each summer.

Master of Arts Theatre Production Program Overview

The graduate program in Theatre Arts is designed to prepare English and drama teachers to teach and produce theatre in the secondary and middle schools. Required core courses are designed specifically for the secondary school setting and include study in stage technology, teaching acting skills, acquiring basic learning in dramatic literature and history, supervised practice in directing plays and musicals, compiling classroom activities, and creating a curriculum for drama program development.

The program is offered almost entirely in the summer months. Some graduate study is available during the regular school year. It should be noted that most students find it necessary to register for thesis credits during the academic year.



Special Facilities and Resources

The department works in two theatres and various studios and shops.

Most graduate courses are offered in the first and second summer sessions. Many are intensive and meet from three to 10 hours per day. Most candidates can complete approximately 16 credits per summer. The Theatre Arts department also offers graduate courses in the Drama Teachers' Summer Institute. Qualified students in the Institute may enroll in the master's degree courses if room permits, and master's candidates may enroll in selected courses from the Institute listings.

Housing for master's candidates and Summer Institute teachers is available in nearby university accommodations. A limited number of teaching or research assistantships are available to qualified candidates for both the summer and the academic year.

Admission Requirements

Incoming candidates are expected to meet the requirements for admission to the Graduate School at Central Washington University and the following program requirements: two years of teaching experience or two years of professional theatre experience earned in preparation for teaching; permission of the faculty, which may include prerequisite courses if the candidate does not hold a bachelor's degree in theatre and basic course work in theatre history. (Prerequisite courses may often be taken in the Drama Teachers' Summer Institute.) An assessment entry exam is required and is taken shortly after classes begin. Neither the Graduate Record Examination nor a foreign language is required for the program.

Program Requirements

A minimum of 52 credits is required for the degree. Thesis credits may be included in the minimum. The thesis required is a full production of a play or musical at an approved outside venue with written documentation, director's book, and video submitted to the department. The candidate's graduate committee which consists of three faculty members selected by the candidate will view the production in performance at the candidate's theatre. An oral examination and defense of the thesis is required. A maximum of 15 graduate credits earned within the previous four years at CWU may be applied to the program. The department and the university reserve the right to determine the acceptability of other transfer credit from any institution. Of the 52 credits required, 40 must be at the 500 level. Prerequisites required for admission to the program may not be applied.

Graduate Assistantships

Teaching or service assistantships are assigned to second or third summer candidates. A limited number are available. Assistantships are appointed by the Dean of Graduate Studies upon recommendation of the department chair.

Assistantship applications must be completed by Feb. 16 in order to insure consideration. Applicants should submit all materials required by the university graduate office. Contact Academic Services at (509) 963-3001 to receive application materials.

Program Requirements

A core program from seven components is required.

Required Core Courses	Credits
Component 1: Directing Skills	13
TH 539, Directing and Teaching Young Actors (3)	
TH 540, Graduate Directing I (3)	
TH 541, Graduate Directing II (3)	
TH 542, Musical Theatre Directing (4)	

Component 2: History, Literature and Criticism	9
TH 501, Introduction to Graduate Studies (1)	
TH 510, Studies in Dramatic Literature (4)*	
TH 511, Analysis and Criticism (4)*	
*Prerequisite: 9 credits of theatre history or literature or TH 503, or committee approval	

Component 3: Acting Skills	6
TH 544, Acting Styles (3)	
TH 545, Voice and Dialects (3)	
TH 546, Teaching Shakespeare (3)	

Component 4: Drama in the Classroom . . .	6
TH 520, Exploring Drama in the Classroom (3)	
TH 521, Program and Curriculum Development (3)	
TH 522, Curriculum and Program Activities (3)	
TH 584, Puppetry in the Classroom (3)	

Component 5: Technology and Design (1 costume, 1 scenic, 1 lights)	9
TH 565, Creative Costuming (3)	
TH 566, Masks and Makeup (3)	
TH 568, Lighting Techniques (3)	
TH 571, Design Methodology (3)	
TH 580, Scenic Methods (3)	

Component 6: Movement and Improvisation	3
TH 531, Mime and Movement (3)	
TH 533, Stage Combat for Teachers (3)	
TH 534, Improvisational Techniques (3)	

TH 547, Musical Theatre Choreography (3)

Component 7: Thesis Project 6
TH 700, Master's Thesis, Project Study and/or Examination (6)

Total 52

Component 8: Enrichment	
TH 503, Survey of Theatre History & Literature (4) [Prerequisite for Component 2]	
TH 543, Acting Fundamentals (3)* [Prerequisite for Component 3]	
TH 560, Stage and TV Makeup* [Component 5]	
TH 562, Costume Accessories* [Component 5]	
TH 570, Musical Theatre Workshop (1-6)	
TH 583, Settings and Properties (3)* [Prerequisite for Component 5]	
TH 585, Puppet Theatre Workshop (1-6)	
TH 587, Theatre Pedagogy* [Components 1, 3, 4, 5, 6]	
TH 598, Musical Theatre Production (4)	
*Acceptable substitution	

Graduate Courses in Theatre Arts

TH 500. Professional Development (1-5). Development topics and issues for inservice and continuing education of professionals. Not applicable to degrees nor institutional requirements for endorsements or teaching certificates offered through the university.

TH 501. Introduction to Graduate Studies (1). Prerequisite: Admission to the M.A. program. Introduction to current theatre research topics and library resources.

TH 503. Survey of Theatre History and Literature (4). Theatre history from beginnings to the present and analysis of selected plays from each period.

TH 510. Studies in Dramatic Literature (4). Prerequisite: TH 501 or concurrent enrollment, TH 503 or 9 credits of Theatre History or Literature or committee approval. Course content identified by title in the university class schedule.

TH 511. Analysis and Criticism (4). Prerequisite: TH 501 or concurrent enrollment, TH 503 or 9 credits of Theatre History or Literature, or committee approval. Critical analysis from Aristotle to the present as applied to selected dramatic texts.

TH 520. Exploring Drama in the Classroom (3). Projects for building drama skills through classroom activities ranging from creative movement to storytelling.

TH 521. Curriculum & Program Development (3). Exploration of national

trends and practices in high school drama programs with emphasis on development in specific situations.

- TH 522. Program and Curriculum Activities (3).** Practical training and application of the units of study, warm-up techniques, and production fundamentals that are the basis of the high school drama curriculum. Continuation of TH 521. Courses need not be taken in sequence.
- TH 531. Mime and Movement (3).** Techniques for teaching basic mime skills and stage movement classes to teenage performers.
- TH 533. Stage Combat for Teachers (3).** Training in unarmed skills. Some training in weapon use may be included. Practice in using and teaching these skills for stage performance.
- TH 534. Improvisational Techniques (3).** Improvisational exercises to teach young actors the purpose of freeing the body and voice, while sharpening their instincts and intuition.
- TH 539. Directing and Teaching Young Actors (3).** Staging and teaching skills to draw truth from young actors and eliminate over-acting and frozen memorization.
- TH 540. Graduate Directing I (3).** Theory and practice in directing realistic plays.
- TH 541. Graduate Directing II (3).** Theory and practice in directing classical plays.

- TH 542. Musical Theatre Directing (4).** Study of the director's preparation and rehearsal practices for coordinating and mounting a full musical production.
- TH 543. Acting Fundamentals (3).** Teaching realistic acting techniques to young actors.
- TH 544. Acting Styles (3).** Practice in applying skills of performance to special textual needs, including stylized comedy, modern realism, and heightened language. TH 544 and TH 444 are equivalent courses. Students may not receive credit for both.
- TH 545. Voice and Dialects (3).** The physiological fundamentals of vocal production and dialect acquisition skills.
- TH 546. Teaching Shakespeare Performance (3).** Prerequisite, acceptance into the Drama Teachers' Summer Institute. Techniques to guide young actors for analysis, preparation, and speaking Shakespeare's language.
- TH 547. Musical Theatre Choreography (3).** Study and practice of basic choreographic skills needed in musical Theatre. May be repeated up to 12 credits.
- TH 560. Stage & TV Makeup (3).** Study of materials, and practice in techniques of creating effect through makeup. Formerly TH 460, may not receive credit for both.
- TH 562. Costume Accessories (3).** Hat making and accessory construction and their relationship to theatrical costuming. Formerly TH 462, may not receive credit for both.

TH 565. Creative Costuming (3). Creating costumes, both realistic and classic, from old clothes and unusual materials with a minimal budget.

TH 566. Masks and Makeup (3). Creating masks from face castings and techniques for special effects makeup. Formerly TH 466, may not receive credit for both.

TH 568. Lighting Techniques (3). Study of color, instruments, drafting and electricity for lighting stage productions, with emphasis on limited equipment and budgets.

TH 570. Music Theatre Workshop (1-6). Participation in the production of a large musical from first rehearsal to opening night.

TH 571. Design Methodology (3). Prerequisites: TH 510. Study and practice in the concepts and fundamentals of design for the stage.

TH 580. Scenic Methods (3). Study and practice in techniques of scenery construction, stage rigging, and painting.

TH 583. Settings and Properties (3). Construction of mock stages using various scene-shifting techniques. Theatre shop safety, set assembly, and prop construction techniques.

TH 584. Puppetry in the Classroom (3). Art of puppetry applied to classroom use by teachers and counselors, emphasizing self-expression and entertainment.

TH 585. Puppet Theatre Workshop (1-6). Participation in the production of a complete puppet theatre show from construction of puppets to first performance.

TH 587. Theatre Pedagogy (4). Prerequisite, permission of the instructor. Student will be given individualized instruction in teaching practices and will participate in journal writing, critiquing, counseling, coaching, advising, leading discussion and grading. May be repeated for credit up to 8 credits. TH 487 and TH 587 are equivalent courses.

TH 591. Workshop (1-6). No more than two workshops for a combined maximum of eight credits can be applied toward a Master's program.

TH 596. Individual Study (1-6).

TH 598. Special Topics (1-6).

TH 599. Seminar (1-5). May be repeated.

TH 700. Master's Thesis Project (1-6). Prerequisites, permission of chair of student's graduate faculty supervisory committee. Designed to credit and record supervised study for the Master's examination. Grade will be either S or U. May be repeated for up to 6 credits.



TRUSTEES

- Leslie Jones, B.S.**
Seattle (September 30, 2009)
- Ken Martin, B.S.**
Cashmere (September 30, 2007)
- Sid Morrison, B.S.**
Zillah (September 30, 2009)
- Jay Reich, J.D.**
Seattle (September 30, 2006)
- Nadine Romero, M.S.**
Olympia (September 30, 2005)
- Mike Sells, B.A.**
Everett (September 30, 2006)
- Judy Yu, M.B.A.**
Seattle (September 30, 2008)
- Matthew Schmitt**
Student Representative
(May 31, 2004)

EXECUTIVE OFFICERS OF THE UNIVERSITY

- Jerilyn S. McIntyre**
President
- David Soltz**
Provost/Senior Vice President for Academic Affairs
- Richard Corona**
Vice President for Business and Financial Affairs
- Charlotte Tullos**
Vice President for Student Affairs and Enrollment Management
- Paul Baker**
Vice President for University Relations
- Elizabeth Street**
Executive Assistant to the President

PRESIDENT'S DIVISION

- Jerilyn S. McIntyre**
President
- Teresa C. Kulik**
Senior Assistant Attorney General
- Jack Bishop**
Director, Athletics
- Shelly Johnson**
Director, Budget
- Elizabeth Street**
Executive Assistant to the President
- Ann Anderson**
Director, Government Relations
- Mark Lundgren**
Director, Institutional Research

- Margaret A. Smith**
Director, Internal Audit
- Nancy E. Howard**
Director, Office for Equal Opportunity

ACADEMIC AFFAIRS

- David Soltz**
Provost/Senior Vice President for Academic Affairs
- Linda S. Beath**
Associate Vice President for Undergraduate Studies
- Wayne S. Quirk**
Associate Vice President for Graduate Studies, Research, and Continuing Education
- Liahna Armstrong**
Dean, College of Arts and Humanities
- Roy Savoian**
Dean, College of Business
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Associate Dean, College of Business
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Dean, College of Education and Professional Studies
- Connie Lambert**
Co-Associate Dean, College of Education and Professional Studies
- Ethan Bergman**
Co-Associate Dean, College of Education and Professional Studies
- Meghan Miller**
Dean, College of the Sciences
- Carin Thomas**
Co-Associate Dean, College of the Sciences
- Philip Tolin**
Co-Associate Dean, College of the Sciences
- Sura Rath**
Director of William O. Douglas Honors College
- Tom Feischl**
Dean of Library Services
- David Kaufman**
Director of Academic Computing
- Margaret Badgley**
Assistant to the Provost for University Centers and Community College Relations
- Michael Launius**
Interim Executive Director, International Studies and Programs
- Neil McFarlane**
Director, Academic Achievement and Student Support Services
- Scott Carlton**
Director, Academic Advising

- Kevin Nemeth**
Director, Continuing Education
- Virginia Mack**
Director, McNair Scholars Program
- Roger Fouts**
Interim Director, Research

STUDENT AFFAIRS AND ENROLLMENT MANAGEMENT

- Charlotte Tullos**
Vice President for Student Affairs and Enrollment Management
- Keith M. Champagne**
Associate Vice President for Student Affairs
- Mike Reilly**
Interim Associate Vice President for Enrollment Management
- Jack Baker**
Assistant to the Vice President for Student Affairs and Enrollment Management
- Carolyn L. Wells**
Undergraduate Studies Research and Data Analyst
- Tracy Terrell**
Registrar
- John E. Drinkwater**
Senior Director, Campus Life and Student Union
- Lisa Garcia-Hansen**
Interim Director, Admissions
- Jacquelyn Johnson**
Director, Career Services
- Katrina A. Whitney**
Director, Center for Student Empowerment
- Lorinda Anderson**
Director, Civic Engagement
- Leslie Webb**
Director, Diversity Education
- Mateo Arteaga**
Director, Educational Opportunity Center, HEP, CAMP
- Agnes Canedo**
Director, Financial Aid
- Chris Hull**
General Manager, KCWU Radio
- Stacy Klippenstein**
Director, Residence Life and New Student Programs
- Robert Trumpy**
Senior Director, Student Health, Counseling, and Wellness

BUSINESS AND FINANCIAL AFFAIRS

- Richard E. Corona**
Vice President for Business and Financial Affairs
- Kevin E. Kimball**
Associate Vice President for Business and Financial Affairs
- Bill Vertrees**
Senior Director, Facilities Management
- Carmen Rahm**
Senior Director, Information and Technology Services
- Ona K. Youmans**
Senior Director, Human Resources
- Bruce Porter**
Director, Business Services and Contracts
- Ken Baxter**
Director, Conference and Retail Services
- Rob Borggrebe**
Director, Dining Services
- Steve Rittreiser**
Director, Public Safety and Police Services
- Ron Munson**
Manager, Environmental Health and Safety
- Mac Taylor**
Manager, Accounting
- Amelia Black**
Manager, Student Financial Services
- Steve Wenger**
Manager, University Bookstore
- Don Diebert**
Director, Enterprise Information Systems
- Roland Tollefson**
Director, Information and Technology Services
- Pat Stanton**
Manager, Enterprise Accounting

UNIVERSITY RELATIONS

- Paul Baker**
Vice President for University Relations
- Ralph Phillips**
Senior Director, Development
- Jen Gray**
Director, Gift and Estate Planning
- Daniel W. Jack**
Director, Alumni Relations
- Mark Anderson**
Director, Public Relations and Marketing

EMERITUS FACULTY

John Agars (1964): Emeritus Professor of Art, 2000; B.A., University of Washington; M.F.A., Washington State University.

James McKenzie Alexander III (1965): Emeritus Professor of Anthropology, 2001; A.B., University of New Mexico; M.S., Clemson University; Ph.D., University of Washington. (SeaTac)

Helen (Patton) Allen (1965): Emeritus Professor of Librarianship, 1975; A.B., Earlham College, Indiana; M.A.L.S., George Peabody College.

Richard Vernon Alumbaugh (1969): Emeritus Professor of Psychology, 2002; B.A., M.S., Fort Hays Kansas State College; Ph.D., Texas Technological College. (Steilacoom)

David Richard Anderson (1969): Emeritus Professor of Mathematics, 1999; B.A. Bradley University; Ph.D., Duke University.

Joel Max Andress (1966): Emeritus Professor of Geography, 1993; A.B., University of Pacific; M.S., Ph.D., University of California at Berkeley.

Jimmie Ray Applegate (1970): Emeritus Professor of Curriculum and Supervision, 1996; B.S., Oregon State University; B.S., M.S., Eastern Oregon College; Ph.D., Washington University, St. Louis.

Walter Harvey Arlt (1968): Emeritus Professor of Health, Human Performance and Recreation, 2000; B.S., Washington State University; M.Ed., Central Washington University.

Emanuel Frank Bach (1951): Emeritus Professor of Art, 1979; B.A., M.A., Colorado State College.

Jay Emil Bachrach (1967): Emeritus Professor of Philosophy, 1998; A.B., Indiana University; Ph.D., Columbia University.

Luther Galloway Baker, Jr. (1964): Emeritus Professor of Family Studies, 1987; A.B., Whitworth College; S.T.B., Boston University School of Theology; Ph.D., Oregon State University.

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- Margaret Ahrens Sahlstrand** (1965): Emeritus Professor of Art, 1996; B.A., Linderwood College; M.F.A., State University of Iowa.
- Dale Verlyn Samuelson** (1973): Emeritus Professor of Flight Technology, 1995; B.A. Ed., Central Washington University.
- Carolyn Campbell Schactler** (1976): Emeritus Professor of Clothing and Textiles, 2000; B.A., M.A., Central Washington University.
- Donald Myron Schliesman** (1957): Emeritus Professor of Curriculum and Supervision, 1996; A.B., Northern State Teachers College, S.D.; A.M., Ed.D., University of Northern Colorado.
- William D. Schmidt** (1963): Emeritus Professor of Curriculum and Supervision, 1999; B.S., University of Nebraska; M.A., San Diego State College; Ph.D., Ohio State University.
- Christian Immo Schneider** (1968): Emeritus Professor of Foreign Languages, 2002; B.A., University of Tübingen (Germany); M.A., Central Washington University; M.A., Ph.D., University of California, Santa Barbara.
- Joe Herbert Schomer** (1971): Emeritus Professor of Teacher Education Programs, 1999; B.A., Washington State University; M.Ed., Central Washington University; Ed.D., University of Idaho.
- Howard B. Scott** (1967): Emeritus Professor of Psychology, 1983; B.A., M.Ed., Western Washington University, Ed.D., University of Washington.
- Frank Q. Sessions** (1967): Emeritus Professor of Sociology, 1989; B.S., Idaho State College; M.S., University of Idaho; Ph.D., University of Utah.
- Lana Jo Taylor Sharpe** (1967): Emeritus Professor of Health, Human Performance and Recreation, 2002; B.S., University of Utah; M.A., Central Washington University.
- Dorothy Harrison Sheldon** (1969): Emeritus Professor of Education, 1988; B.A., M.Ed., College of Idaho; Ed.D., University of Utah.
- John Stanley Shrader** (1957): Emeritus Professor of Science Education, 1984; B.S., M.A., Ed.D., University of Washington.
- John Louis Silva** (1962): Emeritus Professor of Psychology; B.A., M.A., San Jose State College; Ph.D., Washington State University.
- Robert Eugene Silver** (1966): Emeritus Professor of Education, 1981; B.A., Walla Walla College; M.A., Ed.D., University of Washington.
- Gary Lee Smith** (1968): Emeritus Professor of Health, Human Performance and Recreation, 2000; B.S., Northern Michigan University; M.S., Indiana University.
- Milo LeRoy Smith** (1956): Emeritus Professor of Drama, 1990; B.A. (Ed.), Northern Idaho College of Education; M.A., Ph.D., University of Oregon.
- Stamford Dennis Smith** (1968): Emeritus Professor of Biology, 2001; B.A., San Jose State College; M.S., Ph.D., University of Idaho.
- William Charles Smith** (1968): Emeritus Professor of Anthropology; A.B., Ph.D., 1998; University of California at Berkeley.
- Larry Michael Sparks** (1967): Emeritus Professor of Psychology; 1999; B.S., Ph.D., University of Washington.
- Willard Charles Sperry** (1966): Emeritus Professor of Physics, 1997; B.S., Stanford University; M.S., Ph.D., University of California at Davis.
- Constance Helen Weber Speth** (1964): Emeritus Professor of Art, 1995; B.A., M.Ed., Central Washington University; M.F.A., University of Idaho.
- George Stillman** (1972): Emeritus Professor of Art, 1987; B.F.A., M.F.A., Arizona State University; Certificate, San Francisco Fine Art Institute.
- Harry Sidney Sutherland** (1968): Emeritus Professor of Education, 1983; B.S., M.Ed., Lewis and Clark College; Ed.D., University of Portland.
- Azella Taylor** (1964): Emeritus Professor of Education, 1983; B.A., M.Ed., Ed.D., University of Washington.
- Bruce Earle Teets** (1968): Emeritus Professor of English, 1981; A.B., Fairmont State College; A.M., West Virginia University; Ph.D., Duke University.
- Thomas Harvey Thelen** (1970): Emeritus Professor of Biology, 1999; B.S., St. Johns University; Ph.D., University of Minnesota.
- Louise Agnes Tobin** (1959): Emeritus Professor of Home Economics, 1980; B.S., University of Washington; M.S., Oregon State University.
- Ned Toomey** (1967): Emeritus Professor of English, 1987; B.B.A., American University of Beirut; B.J., University of Missouri; M.A., West Texas State University; Ph.D., University of Iowa.
- George Galloway Town** (1972): Emeritus Professor of Computer Science, 1996; B.S., M.S., University of Wisconsin.
- Dan Alex Unruh** (1965): Emeritus Professor of Education, 1991; B.S., Oregon College of Education; M.Ed., University of Oregon; Ed.D., Columbia University.

John Grantham Utzinger (1963): Emeritus Professor of Philosophy, 1993; B.A., Occidental College; M.A., Ph.D., University of Washington.

John Louis Vifian (1961): Emeritus Professor of English, 1998; B.A., Whitworth College; M.A., Washington State University; Ph.D., University of Colorado.

Richard Leo Waddle (1967): Emeritus Professor of Librarianship, 1993; B.A., Marietta College; M.A., M.Librarianship., University of Washington; Ph.D., Washington State University.

Orville Wilson Wensley (1961): Emeritus Professor of Speech Pathology, 1982; B.S., M.A., Western Michigan University.

Raymond Louis Wheeler (1964): Emeritus Professor of Music, 1995; B.M., University of Wyoming; M.M., Eastman School of Music.

Donald Howard White (1981): Emeritus Professor of Music, 1990; B.S., Temple University; M.M., Ph.D., University of Rochester, Eastman School of Music.

Mildred White (1951): Emeritus Professor of Education, 1958; B.A. (Ed.), M.Ed., Central Washington University.

Burton John Williams (1969): Emeritus Professor of History, 1987; B.A., M.A., Southern Illinois University; Ph.D., University of Kansas.

Calvin Gus Willberg (1969): Emeritus Professor of Computer Science and Geography, 1993; B.S., M.S., Ohio State University; Ph.D., University of Washington.

Blaine Ricks Wilson (1975): Emeritus Professor of Administrative Management and Business Education, 1999; B.S., Brigham Young University; M.S., Utah State University; Ed.D., University of Minnesota.

Norman Henry Wolford (1983): Emeritus Professor of Industrial and Engineering Technology, 1996; B.A., M.S., North Carolina State.

Curt A. Wiberg (1956): Emeritus Professor of Biology, 1997; B.S. University of Wisconsin, M.S., University of Oregon.

Robert Henry Wiekling (1981): Emeritus Professor of Industrial and Engineering Technology, 2003; B.A., M.A., San Jose State University; Ph.D., Washington State University.

Robert Yee (1960): Emeritus Professor of Political Science, 1982; B.A., M.A., Ph.D., University of Washington.

Madge Arlene Young (1968): Emeritus Professor of Education, 1982; B.S., University of Nebraska; M.A., San Jose State College; Ed.D., University of the Pacific.

Timothy Wallace Young (1980): Emeritus Professor of Curriculum and Supervision, 2002; A.B., University of Michigan; M.A., Antioch; Ph.D., Indiana University.

Karl Edwin Zink (1968): Emeritus Professor of English, 1982; A.B., M.A., University of Florida; Ph.D., University of Washington.



In 1977, Central Washington University initiated a program to honor professors who excel in teaching, research/artistic accomplishment and public service. The honorees' names are placed on a continuing plaque and they receive a monetary bonus during the award year. The honorees to date are:

1977

Chester Z. Keller, Professor of Philosophy, Ph.D., University of Southern California, Distinguished Teaching

1978

Curt A. Wiberg, Professor of Biology, M.S., University of Oregon, Distinguished Teaching

1979

William F. Cutlip, Professor of Mathematics, Ph.D., Michigan State University, Distinguished Teaching

Martin R. Kaatz, Professor of Geography, Ph.D., University of Michigan, Distinguished Public Service

George Macinko, Professor of Geography, Ph.D., University of Michigan, Distinguished Research

1980

Dee R. Eberhart, Professor of Geography, M.A., Northwestern University, Distinguished Public Service

Kenneth A. Hammond, Professor of Geography, Ph.D., University of Michigan, Distinguished Teaching

Stamford D. Smith, Professor of Biology, Ph.D., University of Idaho, Distinguished Research

1981

Robert D. Bentley, Professor of Geology, Ph.D., Columbia University, Distinguished Research

Marco G. Bicchieri, Professor of Anthropology, Ph.D., University of Minnesota, Distinguished Teaching

1982

Barbara M. Brummett, Associate Professor of Music, M.M., Wichita State University, Distinguished Public Service

Patrick R. O'Shaughnessy, Professor of Accounting, M.B.A., Washington State University, Distinguished Teaching

Robert M. Panerio, Professor of Music, M.Ed., Central Washington University, Distinguished Research

1983

Terry L. DeVietti, Professor of Psychology, Ph.D., University of Utah, Distinguished Research

Leo D. Nicholson, Professor of Health, Human Performance and Recreation, M.Ed., Central Washington University, Distinguished Teaching

Dorothy M. Purser, Associate Professor of Health, Human Performance and Recreation, M.Ed., University of Idaho, Distinguished Public Service

1984

Donald W. Cummings, Professor of English, Ph.D., University of Washington, Distinguished Teaching

Leonard C. Duncan, Professor of Chemistry, Ph.D., University of Washington, Distinguished Research

John F. Moawad, Associate Professor of Music, M.Ed., Central Washington University, Distinguished Public Service

1985

Ronald J. Boles, Professor of Science Education and Biology, Ph.D., University of Wisconsin, Distinguished Teaching

Allen C. Vautier, Associate Professor of Accounting, J.D., University of Washington, Distinguished Public Service

Robert E. Pacha, Professor of Biology, Ph.D., University of Washington, Distinguished Research

1986

Kenneth A. Briggs, Professor of Health Education, Ed.D., University of Northern Colorado, Distinguished Public Service

William B. Owen, Professor of Mathematics, Ph.D., Colorado State University, Distinguished Teaching

1987

Anthony Canedo, Professor of English, Ph.D., University of Washington, Distinguished Teaching

Wolfgang W. Franz, Professor of Economics, Ph.D., Washington State University, Distinguished Public Service

Cynthia S. Kriebel, Professor of Art, M.F.A., Stanford University, Distinguished Artistic Accomplishment

1988

Richard S. Mack, Professor of Economics, Ph.D., Colorado State University, Distinguished Research

1989

Laura L. Appleton, Professor of Sociology, Ph.D., University of California at Santa Barbara, Distinguished Teaching

James E. Brooks, Professor of Geography and Land Studies, Ph.D., University of Washington, Distinguished Public Service

Roger S. Fouts, Professor of Psychology, Ph.D., University of Nevada-Reno, Distinguished Research

1990

Peter M. Burkholder, Professor of Philosophy, Ph.D., Tulane University, Distinguished Teaching

Edward P. Klucking, Professor of Biology, Ph.D., University of California at Berkeley, Distinguished Research

1991

Makiko Doi, Associate Professor of Library Science, University of Washington, Distinguished Public Service

Thomas J. Kerr, Professor of Political Science, Ph.D., Syracuse University, Distinguished Teaching

Christian I. Schneider, Professor of German, Ph.D., University of California at Santa Barbara, Distinguished Research

1992

Elbert E. Bilyeu, Professor of Spanish, Ph.D., University of Colorado, Distinguished Teaching

Donald J. Cocheba, Professor of Economics, Ph.D., Washington State University, Distinguished Research

1993

Robert J. Carbaugh, Professor of Economics, Ph.D., Colorado State University, Distinguished Teaching

Glenn A. Madsen, Professor of Education, Ed.D., University of Oregon, Distinguished Public Service

1994

William V. Dunning, Professor of Art, M.F.A., University of Illinois, Distinguished Artistic Accomplishment

Gary W. Heesacker, Professor of Accounting, M.B.A., University of Washington; C.P.A.; Distinguished Public Service

David G. Lygre, Professor of Chemistry, Ph.D., University of North Dakota, Distinguished Teaching

1995

Carlos E. Martín, Professor of Spanish; Ph.D., Northwestern University; Distinguished Teaching

Kent D. Richards, Professor of History; Ph.D., University of Wisconsin; Distinguished Research

1996

A. James Hawkins, Professor of Theatre Arts; M.A., Sacramento State College; Distinguished Public Service

John Q. Ressler, Professor of Geography; Ph.D., University of Oregon; Distinguished Teaching

Carolyn C. Schactler, Professor of Clothing and Textiles; M.A., Central Washington University; Distinguished Research/ Artistic Accomplishment and Invention

1997

James L. Nimnicht, Professor of Business Administration; Ph.D., University of Nebraska-Lincoln; Distinguished Teaching

Roger H. Yu, Professor of Physics; Ph.D., Montana State University; Distinguished Research

1998

Morris L. Uebelacker, Associate Professor of Geography; Ph.D., University of Oregon; Distinguished Teaching

Hal J. Ott, Professor of Music; D.M., Florida State University; Distinguished Research/ Artistic Accomplishment and Invention

Norman J. Gierlasinski, Professor of Accounting; D.B.Admin., Nova University; Distinguished Public Service

1999

Karen Jane Blair, Professor of History; B.A., Mount Holyoke College; M.A., Ph.D., State University of New York; Distinguished Research/ Artistic Accomplishment and Invention.

David Lawrence Gee, Professor of Foods and Nutrition; B.S., M.S., Ph.D., University of California at Davis; Distinguished Teaching.

Stephen Charles Jefferies, Professor of Health, Human Performance and Recreation; B.Ed., University of Exeter, Devon, England; M.S., Ph.D., University of Oregon; Distinguished Public Service.

2000

Patricia Anne Callaghan (1984): Professor of English; B.A., M.A., University of Washington; M.A., Ph.D., University of Oregon.

Terry Lynn Martin (1986): Professor of English; B.A., Western Washington University; M.A., Ph.D., University of Oregon.

2001

Ethan Alan Bergman (1986): Professor of English; Ph.D., University of Colorado; Distinguished Public Service.

Robert John Carbaugh (1985): Professor of Economics; Ph.D., Colorado State University; Distinguished Teaching.

Larry Dee Gookin (1981): Professor of Music; M.M., University of Oregon; Distinguished Research.

2002

David Michael Darda (1987): Associate Professor of Biological Sciences; Ph.D., University of California, Berkeley; Distinguished Teaching.

Corwin King (1976): Professor of Communication; Ph.D., Pennsylvania State University; Distinguished Public Service.

Mark Warren Halperin (1966): Emeritus Professor of English, 2002, M.F.A., State University of Iowa; Distinguished Research/ Artistic Accomplishment.

2003

David Warner Carns (1986): Professor of Industrial and Engineering Technology; M.S., Oregon State University. Distinguished Teaching.

James G. Pappas (1980): Professor of Teacher Education Programs; Ed.D., Nova Southeastern University. Distinguished Public Service.

Alla Ditta Raza Choudry (1986): Associate Professor of Mathematics; Ph.D., University of Bucharest, Romania. Distinguished Research/ Artistic Accomplishment.



J. Anthony Abbott (2001): Assistant Professor of Geography; B.S., M.S., University of Georgia; Ph.D., University of Minnesota.

Laila Abdalla (1996): Associate Professor of English; B.A., M.A., Ph.D. McGill University.

Graeme Aggett (2003): Assistant Professor of Center for Spatial Information; B.Sc; M.Sc, University of Auckland; Ph.D., University of California.

Osman Alawiye (1989); Professor of Curriculum & Supervision; B.A., Dakota Wesleyan University; M.A., University of South Dakota; Ph.D., New Mexico State University.

Yvonne Diane Alder (1985): Lecturer of Information Technology and Administration Management; B.A., Washington State University.

John Alexander Alsoszatai-Petheo (1983): Professor of Anthropology; B.A., California State University; M.A., Eastern New Mexico University, Ph.D., University of Alberta.

John Arnold Alwin (1993): Professor of Geography; B.S., Wayne State University; M.S., Washington State University; M.A., University of Montana; Ph.D., University of Manitoba.

Joan M. Amby (1996): Associate Professor of Family and Consumer Sciences; B.A., M.A., San Francisco State University; Ph.D., Oregon State University.

Razvan Andonie (2003): Associate Professor of Computer Science; B.S., M.S., University of Cluj-Napoca; Ph.D., University of Bucharest, Romania.

Tracy J. Andrews (1995): Associate Professor of Anthropology; B.A., Portland State University; M.P.H., Columbia University; Ph.D., University of Arizona.

Laura Lee Appleton (1970): Professor of Sociology; B.A., University of California at Riverside; M.A., Ph.D., University of California at Santa Barbara.

Liahna Armstrong (1996): Professor of English; B.A., Whitman College; M.A., Ph.D., University of California Los Angeles.

MaryAnne Atkinson (1997): Associate Professor of Accounting; B.S., M.B.A., Ph.D., Drexel University, Philadelphia. (Lynnwood).

Mark Babbitt (2000): Assistant Professor of Music; B.M., Eastman School of Music; Master of Music; M.M, Cleveland Institute of Music.

Sharel Babcock (1985): Professor of Teaching Education Programs; B.A., Washington State University; M.Ed., Central Washington University.

Glen LaRoy Bach (1988): Associate Professor of Graphic Design; B.F.A., University of Idaho; M.F.A., Vermont College of Norwich University.

Philip Matthew Backlund (1979): Professor of Communications; B.A., M.A., Humboldt State University; Ph.D., University of Denver.

Bruce David Bagamery (1988): Professor of Business Administration; B.A., M.A., University of Toledo; Ph.D., Northwestern University at Evanston. (Lynnwood).

Kathleen Barlow (2003): Associate Professor of Anthropology; B.A., Pomona College; Ph.D., University of California San Diego.

Christina Barrigan (2003): Assistant Professor of Theatre Arts; B.A., Grinnell College; M.F.A., University of Texas at Austin.

Kimberlee B. Bartel (1995): Associate Information Technology and Administration Management; B.A.Ed., Western Washington University; M.Ed., Central Washington University, Ph.D. Utah State University.

Ozden Bayazit (2003): Assistant Professor of Business Administration; B.S.; Ph.D., Ankara University.

James Philip Beaghan (1983): Professor of Business Administration; B.S., Southern Illinois University; M.B.A., DePaul University-Chicago; D.B.A., U.S. International University. (SeaTac)

Linda Sue Beath (1992): Professor of Curriculum & Supervision; B.A., M.A., Western Washington University; Ph.D., University of Oregon.

Daniel D. Beck (1996): Associate Professor of Biological Sciences; B.S., M.S., Utah State University; Ph.D., University of Arizona.

Gloria T. Beckley (2000): Visiting Assistant Professor of Sociology; B.A., University of Alaska; M.A., University of Chicago; Ph.D., University of Washington.

George Bellah (1999): Associate Professor in Theatre Arts; B.F.A., Northern Kentucky University; M.F.A., University of North Carolina.

William J. Bender (1998): Assistant Professor of Industrial and Engineering Technology; B.A., Washington State University; M.A.S., Oregon State University.

Ethan Alan Bergman (1986): Professor of Food Science and Nutrition; B.S., Eastern Oregon State College; M.S., University of Oregon; M.S., Western Oregon State College; Ph.D., Washington State University.

Catherine Lynn Bertelson (1984): Professor of Information Technology and Administration Management; B.S., M.A., Ph.D., University of Minnesota.

Katherine D. Black (1999): Assistant Professor of Accounting; B.A., M.Ac., Utah State University; J.D., UC Davis School of Law; LL.M., McGeorge School of Law.

Karen Jane Blair (1987): Professor of History; B.A., Mount Holyoke College; M.A., Ph.D., State University of New York.

Stuart F. Boersma (2000): Associate Professor of Mathematics; B.S., University of Puget Sound; Ph.D., Oregon State University

Wendy A. Bohrson (1998): Associate Professor of Geology; B.S., Stanford University; Ph.D., University of California, Los Angeles.

Carolyn Elaine Booth (1997): Assistant Professor of Health, Human Performance, and Recreation, B.S., Whitworth College; M.A., University of Washignton.

Neil A. Bowen (2002): Assistant Professor of Psychology; B.A., University of the Islands, Milan, Italy; B.A., M.A., Ph.D., University of Texas, Austin.

Janet S. Bowers (1994): Professor of Family and Consumer Sciences; B.A., M.S., Central Washington University; Ph.D., Kansas State University.

Rebecca Bowers (2000): Professor of Curriculum and Supervision; B.A., Madison College; M.S., Old Dominion University; Ed.D., University of North Carolina at Greensboro.

Peter Joseph Boyle (1994): Associate Professor of Business Administration; B.A., St. Thomas University, Canada; M.B.A., Memorial University, Canada; M.S., Ph.D., Cornell University.

James N. Bradley (1991): Assistant Professor of Business Administration; B.A., LaVerne College; M.B.A., University of California, Riverside.

- Joseph Bradley** (2001): Assistant Professor of Accounting; B.A., Claremont McKenna College; E.M.B.A., Claremont Graduate University; CPA.
- Rodney L. Bransdorfer** (1995): Associate Professor of Spanish; B.A., Michigan State University; M.A., University of Texas at Austin; Ph.D., University of Illinois.
- Lori Braunstein** (1997): Associate Professor of Information Technology and Administration Management; B.B.A., Washburn University, Kansas; M.B.A. Delta State University, Kansas; Ph.D., Utah State University.
- Michael Raymond Braunstein** (1993): Associate Professor of Physics; B.S., Virginia Military Institute; M.S., Ph.D., University of Colorado.
- Lois Jean Breedlove** (1995): Associate Professor of Communication; B.S., Oregon State University; M.A., The American University.
- Kenneth Alan Briggs** (1977): Professor of Health, Human Performance, and Recreation; B.A., University of Northern Colorado; M.A.T., University of Massachusetts; Ed.D., University of Northern Colorado.
- Matthew Britschgi** (1997): Lecturer, University English as a Second Language; B.A., M.A., University of Idaho.
- Marwin Britto** (2003): Assistant Professor of Curriculum & Supervision; University of Alberta; M.Ed., Northwestern State University of Louisiana.
- Joseph H. Brooks** (1994): Professor of Music; B.M., Walla Walla College; M.M., University of Oregon.
- James Russell Brown, Jr.** (1980): Professor of Political Science; B.A., University of North Carolina; M.A., University of Nebraska; Ph.D., University of Kansas.
- Christopher M. Bruya** (2002): Associate Professor of Music; B.A.; M.M., Central Washington University.
- Patrick Bryan** (1998): Assistant Professor of Biological Sciences; B.S., University of Pennsylvania, Bloomburg; Ph.D., University of Alabama, Birmingham.
- Nancy S. Buerger** (1997): Associate Professor of Family and Consumer Sciences; B.A., Fort Wright College; M.S., State University of Iowa.
- Eric L. Bullock** (2002): Assistant Professor of Chemistry; B.A., B.S., University of Washington; Ph.D., University of Hawaii.
- Peter Manning Burkholder** (1965): Professor of Philosophy; B.A., Harvard University; Ph.D., Tulane University.
- Tim Burnham** (2000): Assistant Professor of Health, Human Performance, and Recreation; B.S., M.S., Central Washington University; Ph.D., Oregon State University.
- Carol Long Butterfield** (1994): Associate Professor of Teacher Education Programs; B.A., Washington State University; B.A., M.Ed., Eastern Washington University; Ph.D., University of Arizona.
- Scott Calahan** (2000): Assistant Professor Industrial & Engineering Technology; B.S., Central Washington University; M.Ed., Heritage College.
- David Kenneth Calhoun** (1973): Professor of Industrial and Engineering Technology; B.S., M.Ed., Oregon State University; Ed.D., Arizona State University.
- Patricia Anne Callaghan** (1984): Professor of English; B.A., M.A., University of Washington; M.A., D.A., University of Oregon.
- Daniel J. CannCasciato** (1995): Professor of Librarianship; B.A., University of Oregon; M.L.I.S., University of California, Berkeley.
- Gregory A. Cant** (2001): Assistant Professor of Business Administration; B.A., Ph.D., University of Western Australia; M.I.R., Queen's University.
- Minerva Lopez Caples** (1986): Professor of Teacher Education Programs; B.A., M.A., University of Texas, Ed.D., Texas A&M University.
- Robert John Carbaugh** (1985): Professor of Economics; B.B.Ad., Gonzaga University; M.S., Ph.D., Colorado State University.
- David Warner Carns** (1986): Professor of Industrial and Engineering Technology; B.S., M.S., Oregon State University.
- Stephen J. Chalmers** (2000): Assistant Professor of Art; B.S., University of Louisville, B.A., Allen R. Hite Art Institute, M.F.A., Southern Illinois University.
- William Chandler** (1997): Associate Professor of Information Technology and Administration Management, B.A., M.S. Central Washington University.
- Ming D. Chang** (2002): Associate Professor of Business Administration; B.A., M.S., Eastern Washington University; Ph.D., University of Texas.
- Leland D. Chapman** (2001): Assistant Professor, Educational Administration Unit, B.A., M.A., Central Washington University; Ed.D., Portland State/University of Oregon.
- Yvonne K. Chapman** (2001): Lecturer, Law and Justice; B.A., J.D., M.A., University of Memphis.
- Dorothy Chase** (2000): Assistant Professor of Health, Human Performance, and Recreation; B.A., University of Winnipeg; M.Ed., Lakehead University, Thunder Bay, Ontario, Canada; Ph.D., Clemson University.
- Irene Cheyne** (2000): Lecturer, Information Technology and Administrative Management; B.A., Eastern Michigan University, Long Beach. M.B.A. University of Puget Sound.
- Michael Shane Chinn** (1995): Professor of Art; B.A., San Jose State University; M.F.A., California State University, Long Beach.
- Raza Alla Ditta Choudary** (1986): Professor of Mathematics; B.S., Government College Civilline, Pakistan; M.Sc., Punjab University, Pakistan; Ph.D., University of Bucharest, Romania.
- Yvonne C. Chueh** (2001): Assistant Professor of Mathematics, B.S., National Taiwan University (Taipei); M.S., Ph.D., University of Connecticut, Storrs.
- Deloris Elaine Cleary** (1994): Associate Professor of Sociology; B.A., B.S., Central Washington University; Ph.D., Washington State University.
- Megan L. Cleaver-Sellick** (2002): Assistant Professor of Business Administration; B.B., Ph.D., Griffith University.
- Cynthia Coe** (2003): Assistant professor of Philosophy; B.A. Middlebury College; Ph.D. University of Oregon.
- Graeme Coetzer** (2003): Assistant Professor of Business Administration; B. Commerce, University of South Africa; M.B.A.; Ph.D., Simon Frazier University.
- Beatrice Anne Coleman** (1997): Associate Professor of Communication; B.S., Eastern Michigan University; M.F.A., Western Michigan University.
- James Cook** (1998): Assistant Professor of History; B.A., University of California, Santa Cruz; M.A., Ph.D., University of California, San Diego.

Tom R. Cottrell (2000): Assistant Professor of Biological Sciences; B.A., University of Colorado, Ph.D., Colorado State University.

John K. Creech (1997): Professor of Librarianship; B.A., M.L.S., University of North Carolina, Chapel Hill.

Toni A. Culjak (1996): Professor of English; B.A., M.L., University of Washington; A.M., University of Michigan; Ph.D., University of Wisconsin.

Bobby Jean Cummings (1990): Professor of English; B.A., San Francisco State University; M.A., Wayne State University; Ph.D., University of Michigan.

Christina M. Curran (1997): Assistant Professor of Teacher Education Programs; B.A. Ball State University; M.Ed. University of New Mexico; Ed.D., University of New Mexico.

Wendel D. Curtis (2002): Assistant Professor of Mathematics; B.S., University of Florida; Ph.D., University of Massachusetts.

Loran E. Cutsinger (1996): Associate Professor of Anthropology; B.A., University of Michigan; M.A., Washington State University; Ph.D., Washington State University.

Leonardo Joseph D'Acquisto (1994): Professor of Health, Human Performance, and Recreation; B.A., California State University, Chico; M.A., Ball State University; Ed.D., University of Northern Colorado.

David Michael Darda (1987): Professor of Biological Sciences; B.S., University of Illinois; Ph.D., University of California, Berkeley.

Kent Davault (1991): Lecturer, Asia University of America Program; B.A., M.A., Central Washington University.

Lourdes Henebry-DeLeon (2001): Assistant Professor of Anthropology; B.A., Florida Technological University; M.A., Eastern New Mexico University.

JoAnn P. DeLuca (1996): Professor of Chemistry; B.S., Antioch College; Ph.D., Harvard University.

James L. DePaepe (1996): Professor of Teacher Education Programs; B.S., M.S., State University of New York-Brockport; Ph.D., University of New Mexico.

Terry Leigh DeVietti (1968): Professor of Psychology; B.A., M.S., Ph.D., University of Utah.

Anthony L. Diaz (2000): Assistant Professor of Chemistry; B.S., University of Washington; M.S., Western Washington University; Ph.D., Oregon State University.

Jesse P. Diaz (1998): Assistant Professor of Psychology; B.A., Columbia Christian College; M.S., Lewis and Clark College, Oregon; Ph.D., Ball State University.

Jeffrey W. Dippmann (2000): Assistant Professor of Philosophy and Religious Studies; B.A., University of Wisconsin-Eau Claire; M.A., Ph.D., Northwestern University.

Timothy Dittmer (1999): Assistant Professor of Economics, B.A., Wheaton College; Ph.D., University of Washington.

Susan Lynn Srubek Donahoe (1992): Professor of Teacher Education Programs; B.F.A., M.A., Ph.D., University of New Mexico.

Barry John Donahue (1984): Professor of Computer Science; B.M.Ed., M.Ed., Ed.D., Montana State University.

Andrew M. Downs (2003): Assistant Professor of Psychology; B.A., University of Notre Dame; M.S.; Ph.D., Washington State University.

George Drake (1998): Associate Professor of English; B.A., Portland State University; M.A., University of Oregon; Ph.D., University of Washington.

John Richard Dugan (1970): Professor of Sociology; B.S., University of Illinois; M.A., Ph.D., Washington State University.

William Owen Dugmore (1968): Associate Professor of Counseling and Psychology; B.A., M.A., Ph.D., University of Utah.

Roxanne Isabel Easley (1997): Associate Professor of History; B.A., University of California; M.A., Ph.D., University of Oregon.

Elwin Grant Eastman (1996): Associate Professor of Computer Science; B.S., University of Wyoming; Ph.D., University of Utah.

Ronald D. Elkins (1997): Assistant Professor of Economics; B.A. Central Washington State College; M.S., Naval Post Graduate School, Monterey, California.

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Jeffrey Leighton Snedeker (1991) Professor of Music; B.A., Heidelberg College; M.M., University of Michigan Ann Arbor; M.A., Ohio State University; D.M.A., University of Wisconsin.

Mark E. Soelling (1985): Assistant Professor of Psychology; B.S., University of Washington; M.S., Western Washington University; Ph.D., California School of Professional Psychology.

David L. Soltz (2001): Professor of Biological Sciences; A.B., University of California, Berkeley; Ph.D., University of California, Los Angeles.

Robert C. Sorrells (2002): Lecturer of Psychology; B.A., University of North Carolina; M.A., Western Carolina University; Ph.D., University of Georgia.

Hugh Matthew Spall (1989): Professor of Business Administration; B.A., University of Montana; M.A., Ph.D., Michigan State University; J.D., University of Miami.

Donna S. Stack (2003): Assistant Professor of Art; B.F.A., Austin Peay University; M.F.A., University of South Florida.

Gerald Joseph Stacy (1990): Professor of English; B.A., St. Procopius College; M.A., Purdue University; Ph.D., Bowling Green State University.

Anthony John Stahelski (1990): Professor of Psychology; B.A., M.A., Ph.D. University of California, Los Angeles.

Stephanie Stein (1989): Professor of Psychology; B.A., University of California, Santa Cruz; M.A., University of California, Santa Barbara; Ph.D., University of Oregon.

Shari Stoddard (2000): Assistant Professor of Art; B.F.A., University of Michigan; M.S., Ph.D., Indiana University.

Elizabeth Moore Street (1979): Professor of Psychology; B.S., M.A., Ed.D., West Virginia University.

Warren Robert Street (1967): Professor of Psychology; B.A., Occidental College; M.A., Ph.D., Claremont Graduate School.

Allen E. Sullivan (1990): Lecturer, Geography; B.A., M.S., Central Washington University; Ph.D., Oregon State University.

Key Sun (2000): Assistant Professor of Law and Justice; B.L., Beijing University; M.A., Ph.D., Rutgers State University.

Lixing Sun (1996): Assistant Professor of Biological Sciences; B.S., M.S., East China Normal University; Ph.D., State University of New York.

Christine Ann Sutphin (1988): Professor of English; B.A., Eastern Oregon College; M.L.S., Ph.D., University of Oregon.

Tamsin Swain (2002): Lecturer, Curriculum and Supervision; B.S., M.A., Central Washington University.

Heidi M. Szpek (2002): Assistant Professor of Philosophy and Religious Studies; B.A., M.A., University of Wisconsin-Milwaukee; M.A., Ph.D., University of Wisconsin-Madison.

Carin Thomas (1995): Associate Professor of Chemistry; B.A., Humboldt State University; Ph.D., University of Nevada, Reno.

Alberta Jean Thyfault (1993): Associate Professor of Teacher Education Programs; B.A., Maryhurst College; M.S., Western Oregon State College; Ph.D., Oregon State University.

Ronald R. Tidd (2001): Associate Professor, accounting; B.S., Iowa State University; Ph.D., University of Minnesota; CPA.

Philip Tolin (1967): Professor of Psychology; B.S., University of Massachusetts; M.A., Ph.D., University of Iowa.

Rosco Nelson Tolman (1970): Professor of Spanish; B.S., Utah State University; M.A., University of Iowa; Ph.D., University of Utah.

Richard Trimble (2002): Associate Professor of Business Administration; B.A., University of Washington; M.B.A., Ph.D., Arizona State University.

William R. Trippett (2001): Assistant Professor of Industrial and Engineering Technology; B.S., J.D., University of Washington.

William Turnquist (1977): Assistant Professor of Business Administration; B.S., M.S., Montana State University.

Morris Leo Uebelacker (1988): Professor of Geography; B.S., Central Washington University; M.A., University of New Mexico; Ph.D., University of Oregon.

Angela Unruh (2001): Lecturer, Information Technology and Administrative Management; B.S., Central Washington University; M.B.A., University of Montana.

Wesley Harvey Van Tassel (1991): Professor of Theatre Arts; B.S., Moorhead State College; M.A., University of North Carolina; Ph.D., University of Denver.

William Chester Vance (1981): Professor of Health, Human Performance, and Recreation; B.A., M.S., California State University at Long Beach; Ed.D., University of Oregon.

Allen Courtney Vautier (1975): Professor of Accounting; B.A., J.D., University of Washington. (Lynnwood)

Steven Daniel Verhey (1999): Assistant Professor of Biological Sciences; B.A., Reed College; M.S., University of Washington; Ph.D., Oregon State University.

Cynthia Vielbig (1999): Lecturer, Curriculum and Supervision; B.A., University of Washington; M.Ed., Seattle University.

Steven R. Wagner (2001): Assistant Professor of Biological Sciences; B.S., Central Washington University; Ph.D., Oregon State University.

Jerry Walters (2002): Lecturer, Curriculum and Supervision; B.A.E., M.A.E., Eastern Washington University.

Penglin Wang (2001): Assistant Professor of Anthropology; B.A., Beijing Foreign Studies University; M.A., Chinese Academy of Social Sciences; Ph.D., University of Hawaii.

Charles S. Wassell, Jr (2003): Assistant Professor of Economics; B.A., University of California, Berkeley; M.S., Ph.D., University of Wisconsin, Madison.

Elizabeth Weinbaum (2003): Assistant Professor of Teacher Education Program; B.A., Capital University; M.A.; Ph.D., Ohio State University.

Thomas Raymond Wellock (1997): Associate Professor of History; B.S., University of Bridgeport; M.A., University of Toledo; Ph.D., University of California, Berkeley.

Nancy G. Wessel (1997): Associate Professor of Sociology; B.A., M.A., Ph.D., Southern Illinois University.

Lisa Lee Weyandt (1991): Professor of Psychology; B.S., Pennsylvania State University; M.S., Ph.D., University of Rhode Island.

Vicki Shaffer White (1998): Assistant Professor of Family and Consumer Sciences; B.A., Brigham Young University; M.S., Central Washington University.

Henry S. Williams (1990): Professor of Curriculum & Supervision; B.A., St. Paul's College, Liberia; M.Ed., Ed.D., East Tennessee State University.

Wendy Anne Williams (1995): Associate Professor of Psychology; B.A., San Diego State University; M.A., Ph.D., University of California, San Diego.

Dale R. Wilson (1996): Assistant Professor of Flight Technology; B. A., Trinity Western University; M.S., Central Missouri State University.

Candace R. Winstead (2002): Assistant Professor of Biological Sciences; B.A., Augustana College; Ph.D., Loyola University Chicago.

Rex Sylvester Wirth (1983): Professor of Political Science; B.A., Weber State College; M.A., Ph.D., University of Tennessee.

Mary J. Wise (1992): Professor of Librarianship; B.A., M.L.S., California State University; M.Ed., Central Washington University.

Don B. Woodcock (1995): Associate Professor of Curriculum and Supervision; B.S., University of Nevada, Reno; M.A., Northern Arizona University; Ph.D., University of Oregon.

Linda Rowland Woody (2001): Assistant Professor of Music; B.A., University of Northern Iowa; M.A.(Ed.), University of Central Oklahoma; Ph.D., University of Oklahoma.

Marla J. Wyatt (1994): Assistant Professor of Family & Consumer Sciences; B.S., M.S., Brigham Young University; Ph.D., Ohio State University.

Hong Xiao (1999): Assistant Professor of Sociology; B.A., M.A., Beijing University; M.A., Ph.D., the University of Connecticut (Storrs).

Taiqian Yang (1998): Associate Professor of Industrial and Engineering Technology; B.S.E.E., Jiaotong University, China; M.S.E.E., North Western Polytech University, China; Ph.D., University of Washington.

Thomas Yen-Ran Yeh (1965): Professor of Librarianship; B.A., Soochow University; M.A., M.A.L.S., University of Minnesota.

Bang-Soon Yoon (1989): Professor of Political Science and Women Studies; B.A., Ihwa Women's University; M.A., Ph.D., University of Hawaii at Manoa.

Therese Young (2002): Lecturer, Health, Human Performance, and Recreation; B.A., College of St. Teresa; M.A., Texas Woman's University.

Tim Lee Yoxtheimer (1981): Professor of Industrial and Engineering Technology; B.A., M.S., Ohio University.



Family Educational Rights and Privacy Act (FERPA)

Notice to Students of Privacy Rights

The Family Educational Rights and Privacy Act (FERPA) of 1974 is a federal law governing access to student education records. FERPA stipulates conditions for release of information from education records and affords students the opportunity to review and seek revision of those records. Central Washington University (CWU) accords all the rights provided by the law, and reserves for itself the right to use and release student education records under the conditions specified by the law.

Education records, as defined by FERPA, include admission, academic, financial aid, and placement records, and other information directly related to students, with the exception of records created by the university police for the purpose of law enforcement, student health records that are created and used solely in connection with the provision of health care, employment records that relate exclusively to individuals in their capacities as employees, and alumni or other post-attendance records. FERPA regulations apply only to records held for institutional use concerning students who enroll at the university; they do not govern records of applicants who are denied admission or who choose not to attend the university. Nor do they govern records kept by a university official that are the sole possession of the maker and are not normally revealed to anyone else except a temporary substitute (e.g., temporary reminder notes).

FERPA stipulates that institutions may not disclose personally identifiable information contained in education records without a student's written consent, except under conditions specified by FERPA. Information is considered personally identifiable if it contains a student's name or the name of family members, a student's local or family address, an identification number, or descriptions or data sufficient to identify an individual.

FERPA permits access to student education records for school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic, research, or other staff position (including those in law enforcement and health care); a person serving on the Board of Trustees; or an individual or organization with whom the university has contracted to serve as its agent or to provide services in support of its operations (examples include attorneys, auditors, collection agents, and the National Student Clearinghouse). Student employees, students serving on official committees, and students serving in other positions in which

they assist a university employee in performing her or his official tasks are also considered school officials. A school official has a legitimate educational interest in a student education record if the official needs to review the record in order to fulfill her or his professional responsibilities or official tasks.

With certain exceptions allowed by the law and listed below, no persons outside the university shall have access to, nor will the institution disclose any information from, a student's education record without the written consent of the student. FERPA permits information to be released from education records without written consent of the student to the following officials and agencies:

- officials of other institutions to which students are applying to enroll

- persons or organizations providing financial aid, individuals and organizations charged with oversight of the university, or of federal or state programs in which the university participates

- accrediting agencies

- parents of any student under the age of 21, regardless of the student's dependency status, in cases where the student has violated laws or university rules governing alcohol or controlled substances

- persons as directed by a judicial order or lawfully issued subpoena, provided the university makes a reasonable attempt to notify the student in advance of compliance (unless directed by judicial authorities not to disclose the existence of an order or subpoena)

- persons in an emergency to protect the health or safety of students or other persons

- the Immigration and Naturalization Service under the terms and provisions of immigration law

With the exception of alcohol and drug violations, CWU does not release information from student education records to parents without the written consent of students.

FERPA permits the university to release information concerning violent crimes and non-forcible sex offenses (statutory rape or incest) committed by its students. Victims of an alleged violent crime or non-forcible sex offense may be informed of the final results of university disciplinary hearings concerning the allegation. When a student is an alleged perpetrator of a violent crime or a non-forcible sex offense and the university concludes with respect to that allegation that the student has violated university rules, the

university may release to the public the name of the student, the offense committed, and the sanction the university imposes against the student.

FERPA further allows student education records to be released to individuals or organizations performing research on behalf of, or in cooperation with, the university. When education records are released for research purposes, FERPA requires the university and its research partners to implement procedures to safeguard their confidentiality. In addition, records released for research must be returned or destroyed when the research is completed, and research findings may not be presented in a manner that makes it possible to identify confidential data from an individual's education record. Central Washington University releases information from student education records to outside researchers only under the conditions specified by FERPA and only to those that agree in writing to safeguard the confidential information contained therein.

At its discretion, Central Washington University may publish or release directory information in accordance with the provisions of FERPA. Directory information includes student name, university and permanent home address and telephone number, e-mail address, a photograph, date of birth, dates of attendance, class, major fields of study, previous institutions attended, awards and honors (including honor roll), degrees conferred (including dates), participation in officially recognized sports and activities, and heights and weights of members of athletic teams. Students may withhold directory information by giving written notification to the office of the Vice President for Student Affairs and Enrollment Management within two weeks after the beginning of fall quarter. Requests for non-disclosure of directory information will be honored until graduation unless students submit a written request to have the block on their directory information removed. Students who wish to withhold directory information after they graduate, which would include their dates of attendance and degrees conferred, must submit another written request to the Vice President for Student Affairs and Enrollment Management. Forms for making requests to withhold directory information are available in the office of the Vice President for Student Affairs and Enrollment Management, Bouillon Hall, Room 204, at the Ellensburg campus.

FERPA provides students with the right to inspect and review information contained in their education records, to challenge the content and accuracy of those records, to have a hearing if the outcome of the challenge is unsatisfactory, and to submit explanatory statements for inclusion in their

files if they disagree with the decisions of the hearing panel. The Vice President for Student Affairs and Enrollment Management has been designated by Central Washington University to establish procedures by which students may review their education records.

Students wishing to review their education records should submit a written request, clearly specifying the records of interest, to the official responsible for maintaining those records. The office of the Vice President for Student Affairs and Enrollment Management will assist in identifying the appropriate official. The responsible official will then make arrangements for the student to inspect the records within forty-five days of the request, and will notify the student of the time and place of inspection. Students may have copies made of their records with certain exceptions (e.g., students may not have a copy of academic records for which a financial "hold" exists, or a transcript of an original or source document produced by another institution or by a person not employed by CWU). Copies will be made at the student's expense at prevailing rates, which are listed in the office of Registrar Services in Mitchell Hall at the Ellensburg campus.

Only records covered by FERPA, as delineated in the above paragraph defining "education records," will be made available for inspection. (However, students may have their health records reviewed by their own physicians.) Furthermore, the university is permitted or required to withhold from students the following sorts of records: financial information submitted by their parents, confidential letters of recommendation to which students have waived their rights of inspection, and education records containing information about more than one student. In the latter case, the institution will permit access only to the parts of education records that pertain to the inquiring student. Nor is the university required to permit students to inspect and review confidential letters and recommendations placed in their files prior to January 1, 1975, provided those letters were collected under established policies of confidentiality and were used only for the purpose for which they were collected.

Students who believe their education records contain information that is inaccurate, misleading, or held in violation of privacy rights or other rights, may ask the university to amend a record. In such cases, the student should write the university official responsible for the record, identify the parts of the record the student believes should be changed, and indicate the reasons

it should be changed. If university officials agree with the student's request, the appropriate records will be amended. If the university decides not to amend the record as requested by the student, the student will be notified and advised of her or his 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. FERPA confers the right to challenge grades only in cases where the grade has been mis-recorded. However, CWU has other procedures for appealing grades.

Student requests for a formal hearing must be made in writing to the Vice President for Student Affairs and Enrollment Management, who, within a reasonable period of time after receiving such a request, will inform the student of the date, place, and the time of the hearing. Students may present evidence relevant to the issues raised and may be assisted or represented at the hearings by one or more persons of their choice, including attorneys, at their own expense. The hearing panels that adjudicate such challenges are appointed by the Vice President for Student Affairs and Enrollment Management. The decisions of the hearing

panel will be based solely on the evidence presented at the hearing and are final. They will consist of written statements summarizing the evidence and the reasons for the decision, and will be delivered to all parties concerned. If the decision is in favor of the student, the education records will be corrected or amended in accordance with the decision of the hearing panel. If the decision remains not to amend the student's education record, the student has a right to insert a statement in her or his record commenting on the information therein. This statement will be maintained as a permanent part of the record and must be included when the record is disclosed to an authorized party.

Students who believe the adjudications of their challenges were unfair, or not in keeping with the provisions of FERPA, may request the assistance of the Office of the President of Central Washington University. Students who believe their FERPA rights have been violated may also file complaints with The Family Policy Compliance Office, U. S. Department of Education, 400 Maryland Avenue S.W., Washington, DC 20202-4605 (<http://www.ed.gov/offices/OM/fpco/>).



Appendix A

WAC 106-72-005 EQUAL OPPORTUNITY/ AFFIRMATIVE ACTION IN EMPLOYMENT

I. Central Washington University is an equal opportunity employer. The University will:

Recruit, hire, train, and promote persons in all job titles, without regard to race, color, religion, national origin, age, sex, sexual orientation, marital status, disability, or status as a disabled veteran or Vietnam-era veteran.

Ensure that all personnel actions such as compensation, benefits, transfers, terminations, layoffs, return from layoff, reductions in force (RIF), university-sponsored training, education, tuition assistance, and social and recreation programs, will be administered without regard to race, color, creed, religion, national origin, age, sex, sexual orientation, marital status, disability, or status as a disabled veteran or Vietnam-era veteran.

II. Central Washington University is committed to affirmative action for Asians, Blacks, Hispanics, Native Americans, women, persons 40 years of age or older, persons of disability, disabled veterans and Vietnam-era veterans. This commitment is expressed through the university's efforts to eliminate barriers to equal employment opportunity and improve employment opportunities encountered by these protected groups.

WAC 106-72-025 EQUAL OPPORTUNITY FOR STUDENTS

Central Washington University will provide students equal access to all programs and services on the basis of merit without regard to race, color, religion, national origin, age, sex, sexual orientation, marital status, disability, or status as a disabled veteran or Vietnam-era veteran.

No person will be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity sponsored by the university, including, but not limited to, admissions, academic programs, student employment, counseling and guidance services, financial aid, recreational activities and intercollegiate athletics.

Programs may be developed by the university, however, for special student populations as affirmative action measures to overcome the effects of past discrimination.

No member of the university community shall treat students differently because of their race, color, religion, national origin, age, sex, sexual orientation, marital status, disability (except to provide reasonable accommodation), or status as a disabled veteran or Vietnam-era veteran. The university has established mechanisms to address complaints of discriminatory treatment, including harassing behaviors (e.g., physical, verbal, graphic, or written) which might lead to the creation of a hostile environment.

III. Gender Equity

Washington state law prohibits discrimination on the basis of gender in institutions of higher education. Provisions of this law can be found in RCW 28B.110. Rules and guidelines have been developed to eliminate possible gender discrimination to students, including sexual harassment. These rules address academic programs, student employment, counseling and guidance services, financial aid, and recreational activities including club sports and intercollegiate athletics.

With respect to higher education student employment, all institutions shall be required to: a) make no differentiation in pay scales on the basis of gender; b) assign duties without regard to gender except where there is a bonafide occupational qualification as approved by the Washington Human Rights Commission; c) provide the same opportunities for advancement to males and females; and d) make no difference in the conditions of employment on the basis of gender in areas including, but not limited to, hiring practices, leaves of absence, and hours of employment.

Admission to academic programs shall be made without regard to gender. Counseling and guidance services for students shall be made available to all students without regard to gender. All academic and counseling personnel shall be required to stress access to all career and vocational opportunities to students without regard to gender. All academic programs shall be available to students without regard to gender. Recreational activities shall be offered to meet the interests of students, with no disparities based on gender. Financial aid shall be equitably awarded by type of aid, with no disparities based on gender.

With respect to intercollegiate athletics, institutions that provide the following shall do so with no disparities based on gender: a) benefits and services (e.g., equipment and supplies; medical services; services and insurance; transportation and per diem allowances; opportunities to receive coaching and instruction; scholarships and other forms of financial aid; opportunities for

competition; publicity and awards, and scheduling of games and practice times); b) opportunities to participate in intercollegiate athletics; c) male and female coaches and administrators. (Institutions shall attempt to provide some coaches and administrators of each gender to act as role models for male and female athletes.)

Each institution shall develop and distribute policies and procedures for handling complaints of sexual harassment.

The executive director of the Higher Education Coordinating Board, in consultation with the Council of Presidents, shall monitor the compliance by institutions of higher education with this chapter. A violation of this chapter shall constitute an unfair practice under chapter 49.60 RCW, including the right to file a complaint with the Human Rights Commission and to bring a civil action, shall apply. This chapter shall supplement, and shall not supersede, existing law and procedures relating to unlawful discrimination based on gender. Institutions of higher education shall distribute copies of the provisions of this chapter to all students. If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

The person responsible for coordinating and monitoring compliance with the provisions of this chapter as well as Title IX, is the Director of Equal Opportunity, Barge Hall 211, Central Washington University, (509) 963-2205. Students with gender discrimination complaints are encouraged to utilize the grievance procedures noted below.

IV. Policy Statement on Sexual Harassment

It is the policy of Central Washington University to maintain a work and academic community which is free from sexual harassment. Sexual harassment violates state and federal law and will not be tolerated by this institution. An individual in violation of this policy will be subject to informal or formal disciplinary action up to and including dismissal from employment.

For the purposes of this policy, sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

- submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or career advancement.
- submission to or rejection of such conduct by an individual is used as a basis for an employment decision or an academic decision affecting such individual; or

- c. such conduct has the purpose or effect of unreasonably interfering with an individual's work or creating an intimidating, hostile or offensive work or academic environment.

Based on the definition provided above, examples of sexual harassment prohibited by this policy include, but are not limited to: physical assault; direct propositions of a sexual nature, or subtle pressure for sexual activity. In addition, behaviors which constitute a pattern of conduct that discomforts or humiliates the recipient are prohibited. Such behaviors may include: comments of a sexual nature; sexually explicit statements, questions, jokes, or anecdotes; unnecessary touching, patting, hugging, or kissing; remarks of a sexual nature about a person's clothing or body; or remarks about sexual activity or speculations about previous sexual experience; and persistent, unwanted attempts to change a professional relationship to an amorous one.

All members of the University community are encouraged to work toward maintaining an educational and work environment free from sexual harassment. To this end,

1. The Director of the Office for Equal Opportunity will provide training programs to educate the university community on the subject of sexual harassment and the university's obligation to prevent its occurrence. In addition, the director will ensure that the sexual harassment policy is appropriately displayed on campus and included in the university's policy manual.
2. Persons who believe they are experiencing sexual harassment are encouraged to act promptly and report such concerns to their immediate supervisor, administrator or department chair, or the Director of the Office for Equal Opportunity (Barge 211, 963-2205) or the Vice President for Student Affairs (Bouillon 204, 963-1515). (Concerns which involve sexually harassing behaviors of university employees may be brought to the Director of the Office for Equal Opportunity. Concerns which involve student to student sexual harassment may be brought to the attention of the Vice President for Student Affairs.) The University encourages resolution of sexual harassment complaints at the lowest possible level. Persons who have been sexually assaulted are also encouraged to contact Campus Police (Campus Safety Building, 963-2958).
3. Supervisors, administrators and department chairs who receive informal sexual harassment complaints will act on them in a timely fashion in an attempt to resolve such situations informally. They may wish to obtain guidance from the office for equal opportunity. If matters

cannot be resolved informally, formal grievance procedures are available.

4. Formal grievance procedures are available. No individual shall be penalized or retaliated against in any way by the university community for his or her participation in the grievance process.
 - a. Formal complaints alleging sexual harassment by a university employee or other agent of the university may be filed in the Office for Equal Opportunity. The university's equal opportunity grievance procedures will be utilized to resolve the complaint. Copies of these procedures are available upon request.
 - b. Formal complaints alleging student peer sexual harassment must be made to the Vice President for Student Affairs.
 - c. Complaints may also be filed with outside government agencies. A list of these agencies and their addresses is available in the Office for Equal Opportunity.

V. Equal Opportunity Grievance Procedures

- A. A person who believes he or she has been discriminated against by Central Washington University because of race, color, ethnic background, sexual orientation, religion, national origin, sex, physical or mental disability, or Vietnam era or disabled veteran status is encouraged to utilize the grievance procedures provided by Central Washington University. There are informal and formal means of addressing complaints through the Office for Equal Opportunity. These should be used as soon as possible after the alleged act of discrimination. No individual shall be penalized or retaliated against in any way by the university community for his or her participation in this complaint procedure.
- B. All persons who seek the advice and assistance of the Office for Equal Opportunity shall have explained to them the informal and the formal grievance procedures available to them through the university as well as the existence of external complaint procedures available through state and federal agencies. They shall also receive a copy of the equal opportunity grievance procedures.

Copies of the Equal Opportunity Grievance Procedures as well as copies of the University's Equal Opportunity and Affirmative Action Policies are available in the Office for Equal Opportunity. The office is open during regular business hours and is located in Barge Hall 211 (963-2205).

Appendix B

Central Washington University Student Rights and Responsibilities Policy

Section One Statement of Rights and Responsibilities

I. Preamble

Central Washington University is a community that exists for the generation, acquisition, diffusion, and preservation of knowledge, the growth of all its members, and the general well-being of society. Free inquiry and free expression are indispensable to the attainment of these goals. All members of the University community are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth in an atmosphere of academic freedom. Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom as well as elsewhere on campus. The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the University community. The University has developed policies and procedures which provide and safeguard this freedom, within the framework of general standards, and with the broadest possible participation of the members of the University community. This document articulates the general policies that provide for the academic freedom of students in this University community and forms the basis on which more specific policies such as the Student Judicial Code, rules on students records, etc., have been formulated and adopted.

II. Access to Central Washington University

- A. **Admissions, Retention and Graduation**
Central Washington University supports equal educational opportunity for all regardless of sex, race, color, creed, national origin, age, sexual orientation, marital status, handicap, or religion, disability or status as a disabled or Vietnam era veteran. Persons seeking admission to the University have the right to be admitted if they meet the admission standards established for the University by the board of trustees of Central Washington University.

Admission to the University does not automatically admit students to those programs which have special standards for admission or which may restrict admissions on the basis of available resources. To be eligible for continued enrollment in the University and for graduation from the University, students are responsible for meeting the University's published requirements for retention and graduation.

B. University Facilities and Services

All regular students have the right to make full use of the facilities and services of the University which are generally available to students. There are, however, some limitations on the availability and use of University resources. Students are expected to use University facilities and services responsibly and with consideration for other members of the University community. Offices responsible for providing facilities and services will, upon request, furnish guidelines for their use.

III. Student, Faculty, Staff Relationship

The relationship between students and faculty/staff is one which is based upon mutual respect. Students see faculty and staff in a variety of roles: teachers, counselors, librarians, administrators, advisors, employers, supervisors, colleagues. In those rare instances where a student may wish to pursue a grievance having to do with grades or actions taken by a faculty member or a staff member of an office or department which adversely affected the student's academic progress, the University provides a procedure by which the grievance may be pursued. The rules for the process are contained in the Rules Governing the Operations of the Board of Academic Appeals, copies of which are available in the office of the Vice President for Student Affairs.

A. In the Classroom

1. Student Rights

A student who enrolls in a course has the following rights:

- a. to know from the instructor the goals and content of the course;
- b. to know from the beginning the instructor's expectations and grading methods;
- c. to be evaluated on the materials of the course and not on extraneous matters; and
- d. to consult with the instructor outside the classroom on matters related to the course.

2. Student Responsibilities

A student who enrolls in a course has

responsibility to observe the standards of academic performance defined by the instructor and the standards of conduct established by the instructor so as to assure the freedom of the instructor to teach and the freedom of the other students to learn.

B. Outside the Classroom

Students have a right to the services provided by faculty and staff, including such services as academic advising, counseling over a broad range of problem areas, dissemination of information, and clarification of University policies and procedures, including those involving grievances. Because of the size and complexity of the University, students have the primary responsibility for initiating requests for such services, although faculty and staff are expected to be sensitive to students' needs and to offer assistance if students appear to need it.

IV. Student Records

A. Student Records Rules

The University has adopted rules which govern the form and variety of student records collected and maintained by the University, the nature of information collected, and the way in which student information is recorded, maintained and eventually disposed of, consistent with federal and state regulations. Copies of the rules (in accordance with Public Law 93-380 The Family Educational Rights and Privacy Act of 1974, i.e., The Buckley Amendment) are available in the office of the Vice President for Student Affairs. Students have a right to expect that information about themselves of a private, personal or confidential nature which they share with faculty and staff will be disclosed only according to student records rules. Faculty and staff may provide judgments of a student's ability and character to others in appropriate circumstances, normally with the knowledge and consent of the student concerned, and in accordance with the University's rules on student records.

B. Students' Rights

The rules on student records also define the following rights of students with respect to their records and the procedures to be followed to guarantee those rights:

1. the right to inspect and review information contained in their educational records;
2. the right to challenge the contents of their educational records;

3. the right to submit an explanatory statement for inclusion in the educational record if the outcome of the challenge is unsatisfactory;
4. the right to prevent disclosure, with certain exceptions, of personally identifiable information;
5. the right to secure a copy of the University rules, which includes the location of all educational records; and
6. the right to file complaints with the appropriate federal and state agency(ies) concerning alleged failures by the University to comply with applicable laws, rules and their implementing regulations.

C. Students' Responsibilities

Students are responsible for furnishing, completely and accurately, such pertinent information as required by the University so that it may perform its proper function as an educational institution. If students' circumstances change, e.g., name, address, financial situation, etc., they are responsible for seeing that proper University officials are informed of such changed circumstances.

V. Student Affairs

Student affairs encompasses a broad area including the freedoms to form associations, to inquire and express opinions, and to participate in institutional government.

A. Association

Students have the right to form organizations and to join associations to promote their common interests. In doing so, they have the responsibility to follow University policies and procedures, copies of which are available in the office of the Director of Campus Life.

B. Inquiry and Expression

Students and student organizations have the right to examine and discuss all questions of interest to them, to express opinions publicly and privately, to support causes and to invite and hear any person of their own choosing. Such activities shall not disrupt the regular and essential operation of the University. Students and student organizations are responsible for following the policies and procedures related to these activities, copies of which are available in the office of the Director of Campus Life.

C. Student Participation in Institutional Government

Students have the right to express their views by lawful procedures on issues of institutional policy and on matters of general interest to the student body and

to participate in the formulation and application of institutional policy affecting academic and student affairs. Student government, the Associated Students of Central Washington University, is the primary vehicle for student participation in institutional government, and its role is explicitly stated in its constitution and by-laws, copies of which are available in the office of the Director of Campus Life. Other opportunities for involvement in academic and student affairs areas may be found in the various departmental or administrative offices. Having become involved in institutional governance, students are responsible for fulfilling the obligations they have undertaken.

VI. Student Conduct

Students are members of both the University community and the larger community outside the University. As members of the University community, students are guaranteed those rights described in this document. As members of the larger community, students are afforded those rights guaranteed by the state and federal constitutions, the authority of which extends across both communities.

At the same time, both communities have established standards of conduct designed to protect their essential purposes. The University community has defined in its Student Judicial Code that conduct in which its members may not engage without penalty. The larger community has defined such behavior in its laws.

Outlined below are the standards in disciplinary proceedings established by the University with respect to student conduct which violates the norms of either the University or the larger community.

A. The University Community

The Student Judicial Code enumerates proscribed behavior and describes procedures followed in cases where students are alleged to have engaged in such conduct. These procedures guarantee procedural due process to the accused students and are fully described in the Student Judicial Code, copies of which are available in the office of the Vice President for Student Affairs.

B. The Larger Community

If a student's behavior results in charges that both the law of the larger community and the proscriptions of the University's Student Judicial Code have been violated, the University does not waive the right to initiate proceedings in accordance with provisions of the Student Judicial Code.

Section Two

Student Judicial Code (Refer to WAC 106-120 for complete Code. Revisions and current policy available in the office of the Vice President for Student Affairs.)

I. General Policy

A. Definitions

1. "University" shall mean Central Washington University.
2. "Vice President" shall mean the Vice President for Student Affairs of the University or the Vice President's designee.
3. "Student" shall mean a person enrolled at the University either full or part time, pursuing undergraduate, graduate, or extension studies, or a person accepted for admission or readmission to the University.
4. "University community" shall include the employees and students of Central Washington University and all property and equipment of the University.
5. "Hazing" shall include any method of initiation into a student organization or living group, or any pastime or amusement engaged in with respect to such an organization or living group that causes, or is likely to cause, bodily danger or physical harm, or serious mental or emotional harm, to any student or other person attending Central Washington University. The term does not include customary athletic events or other similar contests or competitions.

B. Introduction and Purpose

The students of Central Washington University are responsible for complying with policies, standards, rules, and requirements for academic and social behavior formulated by the University for the maintenance of an orderly and responsible functioning of the University community. At the same time, students have protection through orderly procedures against arbitrary or capricious actions or decisions by University authorities. Due process is recognized as essential to the proper enforcement of University rules. The purpose of this document is to provide a procedure and rules by which a student will be afforded due process in the matter of alleged violations of University standards, rules and requirements governing academic and social conduct of students.

The University recognizes a responsibility to resolve behavior

problems before they escalate into serious problems requiring the application of these rules. Therefore, the Vice President shall generally review and/or investigate student behavioral problems which are referred by University community members or any subsidiary judicial agencies to the Campus Judicial Council, or which otherwise come to the attention of the Vice President through the office of Public Safety and Police Services reports or other official University reports. The Vice President and the problem-solving group shall be as proactive as is possible concerning the resolution of student behavioral problems and use reasonable arbitration and conflict resolution methods in order to prevent such problems from further interfering with the University community or the student's own educational progress.

The Vice President shall provide for due process for students throughout the behavioral problem-solving intervention by following the proper steps related to the initiation, investigation, and disposition of complaints against a student as outlined in Section III of this document.

Any student is subject to these rules, independent of any other status the individual may have with the University. Any action taken against a student under these rules shall be independent of other actions taken by virtue of another relationship with the University in addition to that of student.

C. Cooperation with Law Enforcement Agencies

Central Washington University distinguishes its responsibility for student conduct from the controls imposed by the larger community beyond the University, and of which the University is a part. The University does not have the responsibilities of a parent for the conduct of students, and will not be held responsible for conduct of students off campus. When students are charged with violations of laws of the nation or state, or ordinances of the county or city, the University will neither request nor agree to special consideration for students because of their status as students, but the University will cooperate with law enforcement agencies, courts, and any other agencies in programs for rehabilitation of students.

Central Washington University reserves the right to impose the provisions of this policy and apply further sanctions before

or after law enforcement agencies, courts, and other agencies have imposed penalties or otherwise disposed of a case.

II. Proscribed Conduct

A student shall be subject to disciplinary action or sanction upon violation of any of the following conduct proscriptions:

- A. disruptive and disorderly conduct which interferes with the rights and opportunities of other students to pursue their academic studies;
- B. academic dishonesty in all its forms including, but not limited to:
 1. cheating on tests;
 2. copying from another student's test paper;
 3. using materials during a test not authorized by the person giving the test;
 4. collaboration with any other person during a test without authority;
 5. knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an unadministered test or information about an unadministered test;
 6. bribing any other person to obtain an unadministered test or information about an unadministered test;
 7. substitution for another student or permitting any other person to substitute for oneself to take a test;
 8. "plagiarism" which shall mean the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit;
 9. "collusion" which shall mean the unauthorized collaboration with any other person in preparing work offered for credit.
- C. filing a formal complaint with the Vice President for Student Affairs with the intention of falsely accusing another with having violated a provision of this Code;
- D. furnishing false information to any University official, especially during the investigation of alleged violations of this Code;
- E. furnishing false information to the Campus Judicial Council with the intent to deceive, the intimidation of witnesses, the destruction of evidence with the intent to deny its presentation to the Campus Judicial Council or the willful failure to appear before the Campus Judicial Council or the Vice President when properly notified to appear;
- F. intentionally setting off a fire alarm or reporting a fire or other emergency or tampering with fire or emergency equipment except when done with the reasonable belief in the existence of a need therefore;
- G. forgery, alteration, or misuse of University documents, records, or identification cards;
- H. sexual assault in any form, including acquaintance rape and other forced and/or nonconsensual sexual activity;
- I. actual or attempted physical/emotional abuse of any person or conduct which threatens or endangers the health and safety of any person or which intentionally or recklessly causes a reasonable apprehension of harm to any person;
- J. harassment of any sort or any malicious act which causes harm to any person's physical or mental well being;
- K. recklessly engaging in conduct which creates a substantial risk of physical harm to another person;
- L. creating noise in such a way as to interfere with university functions or using sound amplification equipment in a loud and raucous manner;
- M. theft or malicious destruction, damage or misuse of University property, private property of another member of the University community, whether occurring on or off campus; or theft or malicious destruction, damage or misuse on campus of property of a nonmember of the University community;
- N. unauthorized seizure or occupation or unauthorized presence in any University building or facility;
- O. intentional disruption or obstruction of teaching, research, administration, disciplinary proceedings, or other University activities or programs whether occurring on or off campus or of activities or programs authorized or permitted by the University pursuant to the provisions of this document;
- P. intentional participation in a demonstration which is in violation of rules and regulations governing demonstrations promulgated by the University pursuant to the provisions of this document;
- Q. unauthorized entry upon the property of the University or into a University facility or any portion thereof which has been reserved, restricted in use, or placed off limits; unauthorized presence in any University facility after closing hours; or unauthorized possession or use of a key to any University facility;
- R. possession or use on campus of any firearm, dangerous weapon or incendiary device or explosive unless such possession or use has been authorized by the University;
- S. possession, use, or distribution on campus of any controlled substance as defined by the laws of the United States or the state of Washington except as expressly permitted by law;
- T. violation of the University policy on alcoholic beverages which states:
 1. Persons twenty-one (21) years of age or older may possess and/or consume alcoholic beverages within the privacy of their residence hall rooms or apartments. Washington state law provides severe penalties for the possession or consumption of alcoholic beverages by persons under twenty-one (21) years of age and for persons who furnish alcoholic beverages to minors. All University students should be aware of these laws and the possible consequences of violations.
 2. The University does not condone the consumption of alcoholic beverages by minors at functions sponsored by Central Washington University organizations. Organizations are held responsible for the conduct of their members at functions sponsored by the organization and for failure to comply with Washington state law.
 3. The Campus Judicial Council may place on probation any organization or prohibit a specific campus social function when the consumption of alcoholic beverages has become a problem of concern to the University.
- U. conduct which violates the University policies on computer use;
- V. violation of clearly stated proscriptions in any published rule or regulation promulgated by any official campus committee or commission or council acting within the scope of its authority;
- W. violation on campus of any state or federal law or violation of any state or federal law off campus while participating in any University-sponsored activity.
- X. conspiracy to engage in hazing or participation in hazing of another.

III. Initiation, Investigation and Disposition of Complaints

A. Philosophy

When student behavioral problems occur, the University employs a team problem-solving approach. The Directors of Residential Services, Equal Opportunity, Student Health and Counseling Services, Center for Student Empowerment, University Relations, and the Chief of Police join the assistant and Associate Vice Presidents for Student Affairs in weekly meetings to review Residence Hall Incident Reports filed by Living Group Advisors and Hall Managers, as well as Campus Police Reports which cover both on- and off-campus students. This problem-solving team then deals with student behavioral problems which constitute violations of this Code.

The problem-solving team works together to suggest intervention strategies which are considered to be most appropriate and effective for eliminating specific negative student behaviors.

B. Process

Incidents which come to the attention of the problem-solving team may be addressed in one of the following ways:

1. no action;
2. informal meetings with relevant University officials;
3. referral to the residence hall arbitration council for resolving certain disputes within the residence halls;
4. proceedings in the office of the Vice President for Student Affairs. Official proceedings in the Vice President's office are conducted when it becomes apparent to the problem-solving team that the initial and more informal forms of intervention with a student have been unsuccessful in positively modifying a student's behavior.

C. Investigation and Disposition of Complaints

The following rules will govern the processing of alleged violations of the proscribed conduct listed in the Student Judicial Code.

1. A complaint alleging misconduct against any student at the University may be filed by anyone at the office of the Vice President for Student Affairs. Students, faculty members, administrators and other employees of the University shall have concurrent

authority to request the commencement of the disciplinary proceedings provided for in this chapter. A person filing a complaint shall be complainant of record.

2. Any student charged in a complaint shall receive written notification from the vice president. Such notice shall:
 - a. inform the student that a complaint has been filed alleging that the student violated specific provisions of the Student Judicial Code and the date of the violation(s);
 - b. set forth those provisions allegedly violated;
 - c. specify a time and date the student is required to meet with the Vice President or designee; and
 - d. inform the student that failure to appear at the appointed time at the Vice President's office may subject the student to suspension from the University.
3. When the Vice President meets with the student, the Vice President shall:
 - a. provide for the student a copy of the Student Judicial Code;
 - b. review the alleged violation with the student; and
 - c. conduct an investigation into the alleged violation.
4. Upon completion of the review with the student and/or the investigation, the Vice President may:
 - a. drop the charges when they appear to be invalid without substance or capricious;
 - b. issue a verbal warning;
 - c. apply any of the sanctions as outlined in Section IV if such sanction is warranted by the evidence;
 - d. refer the case to the Campus Judicial Council; or
 - e. invoke the summary suspension procedure as outlined in Section VII when deemed appropriate.
5. The Vice President shall inform the student that only suspension and expulsion sanctions may be appealed to the Campus Judicial Council, and that if an appeal is made, the Vice President shall take no action nor make any determination, except for summary suspension, in the matter other than to inform the student of the time, date, and location of the proceeding by the Campus Judicial Council.

IV. Disciplinary Sanctions

The following definitions of disciplinary terms have been established and may be the sanctions imposed by the Vice President for Student Affairs or by the Campus Judicial Council.

A. Warning

Notice in writing that the student has violated University rules or regulations or has otherwise failed to meet the University's standard of conduct. Such warning will contain the statement that continuation or repetition of the specific conduct involved or other misconduct will normally result in one of the more serious disciplinary actions described below.

B. Disciplinary Probation.

Formal action specifying the conditions under which a student may continue to be a student at the University including limitation of specified activities, movement, or presence on the CWU campus including restricted access to any University building. The conditions specified may be in effect for a limited period of time or for the duration of the student's attendance at the University.

C. Restitution.

An individual student may be required to make restitution for damage or loss to University or other property and for injury to persons. Failure to make restitution will result in suspension until payment is made.

D. Suspension.

Dismissal from the University and from status as a student for a stated period. The notice suspending the student will state in writing the term of the suspension and any condition(s) that must be met before readmission is granted. The student so suspended must demonstrate that the conditions for readmission have been met. There is to be no refund of fees for the quarter in which the action is taken, but fees paid in advance for a subsequent quarter are to be refunded.

E. Deferred Suspension.

Notice of suspension from the University with the provision that the student may remain enrolled contingent on meeting a specified condition. Not meeting the contingency shall immediately invoke the suspension for the period of time and under the conditions originally imposed.

F. Expulsion.

The surrender of all rights and privileges of membership in the University community and exclusion from the campus without any possibility for return.

- G. For the specific instance of hazing, forfeiture of any entitlement of state-funded grants, scholarships, or awards for a specified period of time.

V. Campus Judicial Council

A. Purpose

The Campus Judicial Council shall be the principal campuswide judicial body with jurisdiction over all students, whether graduate or undergraduate, and student organizations and authority to hear all charges of misconduct. It has authority to impose the sanctions described in Section IV. Other divisions of the University may elect to establish subsidiary judicial agencies over which the Campus Judicial Council will have appellate jurisdiction. Subsidiary judicial agencies or persons levying sanctions should devise sanctions which are in proportion to both the nature and extent of the misconduct, and which redress injury, damage, expense, inconvenience and/or grievance as far as possible. Appeal from subsidiary councils or agencies must be made within five working days from the time of publication of findings by said subsidiary judicial agency. Failure to file such an appeal will constitute and be construed as full acceptance by all parties of the findings.

B. Composition

The following rules govern the composition of the Campus Judicial Council:

1. The Council shall consist of six faculty members holding the rank of assistant professor or above, and eight students, at least one of whom should be a graduate student if a graduate student files for appointment to the Council.
 - a. The faculty members of the Council shall be designated in accordance with procedures established by the Faculty Senate.
 - b. The student members of the Council shall be selected in accordance with procedures established by the constitution of the Associated Students of Central Washington University. Eight student members shall be appointed, each student being appointed for a term of one calendar year. Terms of office for students begin with the first day of instruction of the academic year for which the student is appointed.
2. A Campus Judicial Council chair shall be elected at the first meeting each academic year and shall continue in office until the person resigns or is

recalled. The duties of the Chair are as follows:

- a. to call regular and special meetings of the Council by notification to members at least twenty-four (24) hours in advance of the meeting time, except in bona fide emergency situations;
 - b. to preside over all regular and special meetings;
 - c. to act as presiding officer at all meetings of the proceeding board.
3. Two of the faculty members and three of the student members of the Council shall constitute a quorum.
 4. The Vice President shall appoint a faculty member as a Judicial Council Advisor whose duties shall be to:
 - a. convene the Council; and
 - b. advise the Council during all meetings and hearings.

VI. Procedures for Proceeding Before the Campus Judicial Council

A. When a case is referred to the Campus Judicial Council the Vice President shall forward to the council:

1. a statement describing the alleged misconduct;
2. the name and address of the complainant;
3. the name and address of the student charged; and
4. all relevant facts and statements.

B. The Council Chair shall call a special meeting of the Council and arrange for a proceeding in the following manner:

1. the Council shall determine the time and place of the proceeding, which shall be at least ten (10) days after delivery of written notice to the student. In the interest of timeliness and efficiency, upon the request of either the student or the Vice President, this 10-day interval may be waived by the Vice President, with the student's permission. Time and place shall be set to make the least inconvenience for all interested parties. The Chair may change the time and place of the proceeding for sufficient cause;
2. the Council shall draw lots to determine a proceeding board consisting of five student names and three faculty names, with one student and one faculty serving as alternates to be available until the proceeding board has been constituted, and the chair who will act as the proceeding officer;

3. no case shall be heard unless the full membership of the proceeding board is present;
4. all cases will be heard de novo, whether the case be an appeal from a subsidiary judicial body or is heard as an original complaint.

C. The Council Chair shall send written notice by certified mail of the proceeding to the student's last known address. The notice shall contain:

1. a statement of the date, time, place and nature of the proceeding;
2. to the extent known, a list of witnesses who will appear; and
3. a summary description of any documentary or other physical evidence that would be presented by the University.

D. The student shall have all authority possessed by the University to obtain information he/she specifically describes in writing and tenders to the Council Chair no later than two days prior to the proceeding or to request the presence of witnesses, or the production of other evidence relevant to the proceeding. However, the University shall not be liable for information requested by the student or the presence of any witnesses when circumstances beyond the control of the University prevent the obtaining of such information or the attendance of such witnesses at the proceeding.

E. Proceedings will ordinarily be held in closed session unless the proceeding board determines there is a compelling reason for the proceeding to be open, or the student requests an open proceeding. A closed proceeding shall include only members of the proceeding board, persons directly involved in the proceeding as parties and persons called as witnesses.

F. The proceeding shall be audio tape recorded, and the tape shall be on file at the office of the Vice President for a period of three years.

G. The University shall be represented by the Vice President who shall present the University's case against the student.

H. The student may be accompanied by counsel, or another third party, who may offer advice. If the student utilizes an attorney as advisor, the student must give the Vice President two days notice of intent to do so. If the student elects to be advised by an attorney, the Vice President may elect to have the University advised by an Assistant Attorney General.

- I. The Council Chair shall insure that:
1. the proceeding is held in an orderly manner giving full care that the rights of all parties to a full, fair and impartial proceeding are maintained;
 2. the charges and supporting evidence or testimony shall be presented first, and that there is full opportunity for the accused student to challenge the testimony and/or evidence, and to cross examine appropriately;
 3. the student charged shall next present evidence or testimony to refute the charge, and that there is full opportunity for the accuser to challenge testimony and/or evidence, and to cross examine appropriately; and
 4. only those materials and matters presented at the proceeding will be considered as evidence. The presiding officer shall exclude incompetent, irrelevant, immaterial, and unduly repetitious evidence.

J. Any person disruptive of the proceeding or any other procedure described in this document shall be excluded from the process by the chair of the Campus Judicial Council or by the Vice President using such means as are necessary to insure an orderly process. Any student engaging in such interference shall be in contempt and may be summarily suspended from the University by the Campus Judicial Council or the Vice President immediately. The student shall be subject to a suspension or any lesser sanction as may be determined by the Campus Judicial Council or the Vice President at the time the interference takes place or within fifteen (15) working days thereafter.

K. The student has a right to a fair and impartial proceeding but the student's failure to cooperate with or attend a proceeding procedure shall not preclude the committee from making its finding of facts, conclusions, and recommendations. Failure by the student to cooperate may be taken into consideration by the Campus Judicial Council and the Vice President in deciding the appropriate disciplinary action.

L. Upon conclusion of the proceeding, the proceeding board in closed session shall consider all the evidence presented and decide by majority vote to exonerate the student or to impose one of the sanctions authorized by this document.

M. The student shall be provided with a copy of the board's findings of fact and conclusions regarding whether the student did violate any rule or rules of

the Student Judicial Code and the board's decision as to the appropriate sanction to be imposed.

N. If a student charged with misconduct under this code has been charged with a crime for the same act or closely related acts by federal, state, or local authorities, or if it appears that such criminal charge is under consideration, the Campus Judicial Council may postpone action on the complaint until there has been a disposition of the criminal charge or of the consideration of filing such charge. However, prior to action by other agencies, the Council may proceed to hear and decide the case if in the judgment of the misconduct and the circumstances surrounding it pose a serious risk to the health or well-being of the student or other members of the University. If there is a determination of guilt by the Council and if the subsequent criminal proceedings result in a judgment of acquittal, the student may petition the Campus Judicial Council for a rehearing.

VII. Summary Suspension Proceedings

The Vice President may summarily suspend any student from the University pending investigation, action or prosecution of charges of an alleged proscribed conduct violation or violations, if the Vice President has reason to believe that the student's physical or emotional safety and well-being, or the safety and well-being of other University community members, or the protection of property requires such suspension.

- A. If the Vice President finds it necessary to exercise the authority to summarily suspend a student the Vice President shall:
1. give to the student an oral or written notice of intent to determine if summary suspension is an appropriate action;
 2. give an oral or written notice of the alleged misconduct and violation(s) to the student;
 3. give an oral or written explanation of the evidence in support of the charge(s) to the student;
 4. give an oral or written notice of the time and place of the summary suspension proceeding before the Vice President;
 5. determine a time for the summary suspension proceeding to be held within 36 hours; and
 6. give an oral or written explanation of the summary suspension which may be imposed on the student.

B. At the place and time designated for the summary suspension proceeding the Vice President shall:

1. consider the evidence relating specifically to the probability of danger to the student, to others on the campus, or to property;
2. provide the student with an opportunity to show why continued presence on campus does not constitute a danger to the physical and emotional well-being of self or others, or a danger to property;
3. give immediate oral notice of the decision to the student, followed by written notice; and
4. if summary suspension is warranted, summarily suspend the student for no more than 15 working days with a Judicial Council proceeding of the allegations to have commenced by the end of the suspension period.

C. If a student has been instructed by the Vice President to appear for summary suspension proceedings and then fails to appear at the time designated, the Vice President may suspend the student from the University, and shall give written notice of suspension to the student at the student's last address of record on file with the University.

D. During the period of summary suspension, the suspended student shall not enter the campus of the University other than to meet with the Vice President. However, the Vice President may grant the student special permission for the express purpose of meeting with faculty, staff, or students in preparation for a proceeding before the Campus Judicial Council.

VIII. Readmission After Suspension

Any student suspended from the University under the provisions of the Student Judicial Code may be readmitted upon expiration of the time period specified in the document of original suspension.

If circumstances warrant reconsideration of the suspension prior to its time of expiration, the student may be readmitted following approval of a written petition submitted to the Vice President. Such petitions must state reasons which either provide new evidence concerning the situation which resulted in the suspension, or demonstrate that earlier readmission is in the best interest of the student and the University. Approval for such readmission must be given by the Vice President or by the Campus Judicial Council.

Students who have been suspended and whose suspension upon appeal is found to have been unwarranted shall be provided full opportunity to reestablish their academic and student standing to the extent possible within the abilities of the University, including an opportunity to retake examinations or otherwise complete course offerings missed by reason of such action.

Appendix C

I. Academic Appeals

(Complete policy available in the Office of the Vice President for Student Affairs.)

- A. Academic grievances are defined as the following:
1. a claim by the student that an assigned grade is the result of arbitrary or capricious application of otherwise valid standards of academic evaluation; or
 2. a claim by the student that the standards for evaluation are arbitrary or capricious; or
 3. a claim by the student that the instructor has taken an arbitrary or capricious action which adversely affects the student's academic progress; or
 4. a claim by the student that a University department, program, or office has made a decision not in keeping with University policy or taken an arbitrary, capricious, or discriminatory action which adversely affects the student's academic progress.
- B. A student wishing to pursue an academic grievance must take the following steps to try to resolve the grievance prior to the filing of an official academic appeal:
1. the student shall first attempt to resolve the matter with the instructor;
 2. if resolution is not achieved between the student and instructor, the student shall ask the department chair to resolve the grievance;
 3. if resolution is not achieved at the department chair level, the chair shall forward a written summary to the dean of the school or college in a further effort to achieve resolution;
 4. if resolution is not achieved at this point, the student may petition for a hearing before the Board of Academic Appeals. (An appointment should be made to meet with the Associate or Assistant Vice President for Student Affairs to obtain the necessary forms and information relative to filing the petition.)

Appendix D

I. Accommodation Policy for Students with Disabilities

Title II of the Americans With Disabilities Act of 1990, the Washington state law against discrimination, RCW 49.60, RCW 28B.10.910-914, and Section 504 of the Rehabilitation Act of 1973 prohibit discrimination against persons of disability on the basis of disability. Central Washington University is committed to providing reasonable accommodations to all qualified persons of disability to ensure access to programs, activities, and services.

A. Definitions

To be considered disabled, a student must have a physical, mental, or sensory condition that significantly affects one or more of life's major functions (i.e., walking, talking, hearing, seeing, working, learning, etc.).

A student is considered *qualified* if the student: 1) meets all eligibility criteria, 2) is able to (with or without accommodation) perform the essential functions of the program or activity, and 3) is able to benefit from a service.

The term *accommodation* means any change or adjustment that makes it possible for a student of disability to participate in a program or activity, or benefit from a service.

The term *reasonable* means that provision of the required accommodation will not result in: 1) an undue financial hardship, 2) an undue administrative hardship, or 3) a fundamental alteration to the nature of the program.

Please note that a decision not to provide accommodation:

- a. must take into consideration fiscal resources of the entire University,
- b. must be explained in writing by the University President,
- c. must be defended by the University if legally challenged.

II. Accommodation Procedures

The following procedures have been established in a sincere effort to accommodate students of disability:

A. Establishing Eligibility for Accommodation

1. **REQUESTING ACCOMMODATION:** Students wishing to request accommodation are responsible for initiating contact with Disability Support Services.
 2. **DOCUMENTATION:** Students are responsible for providing documentation that includes the names and results of all tests used to diagnose the disability, describes the nature and effect of the disability, and makes suggestions of specific accommodations that would provide the student access to University programs, activities, and services. This documentation is confidential medical information and will be maintained in separate files in Disability Support Services.
- B. Provision of Academic Accommodations**
1. **Disability Support Services** is responsible for:
 - a. assessing the effect of a student's disability on his/her ability to access the educational process;
 - b. identifying accommodations that the University will provide to ensure that CWU's programs, activities, and services are accessible;
 - c. communicating procedures that outline
 - 1) student and university responsibilities, and
 - 2) set time lines for requests and delivery of accommodations;
 - d. providing services to help faculty and staff accommodate the needs of students.
 2. The **student** is responsible for:
 - a. making the appropriate people on campus aware of his/her need and eligibility for accommodation in a timely manner;
 - b. Working with the faculty, staff, and Disability Support Services to determine how the accommodation will be provided;
 - c. following policies and procedures set forth by the University and by Disability Support Services.

NOTE:

1. The University has no obligation to accommodate a student who fails to establish eligibility with Disability Support Services.
2. The University reserves the right to suspend accommodations to students who abuse services or fail to follow University policies/procedures.
3. If failure to use an accommodation results in damage to CWU equipment, the student will be held responsible for the repair or replacement of the damaged equipment.

4. The faculty and/or staff is responsible for:
- working with the student and Disability Support Services to identify an effective means of providing requested accommodations;
 - providing requested accommodations.

NOTE: To assist faculty and staff in the provision of requested accommodations, Disability Support Services office has programs to provide print materials in alternative formats, administer alternative examination, furnish sign language interpreters, etc. If for any reason the faculty or staff decides not to utilize service provided by Disability Support Services, the faculty/staff member and their department will assume administrative and fiscal responsibility for ensuring that the student's need for accommodations are met.

C. Determination of Qualified

- The student must meet all prerequisite and eligibility criteria as set forth by the department unless that criteria is discriminatory on the basis of disability.
- The student must be capable of performing the essential elements of the program. If in question, the student is responsible for working with the academic department, appropriate faculty/staff, and the Disability Support Services director to determine if s/he (with or without accommodation) can do the essential elements of an academic program/course.
- The academic department/ faculty are responsible for:
 - identifying the essential elements for each academic program/course. This should be done prior to the time that an academic program and/or course is offered. The essential elements of an academic program/course are the key skills, knowledge, or abilities that the program/course is designed to teach the student. When identifying the essential elements, faculty should focus on the desired outcome, not the process used to reach that outcome.
 - working with the student and Disability Support Services director to determine if a student's disability would prevent him/her from doing (with or without accommodation) the essential elements of an academic program/course.
- The Disability Support Services director is responsible for working with a student, academic department, faculty to:
 - review the determination of a

student's ability (with or without accommodation) to acquire the skills that comprise the essential elements of an academic program/course; and

- review essential elements that present barriers to ensure that those elements are essential and not discriminatory against students of disability.

D. Grievance

Any student who believes that she/he has been discriminated against on the basis of disability may file a grievance in the Office for Equal Opportunity, Room 211, Barge Hall (phone: 963-2205 or TDD 963-2007). Grievances may be pursued either formally or informally. A list of state and federal agencies which investigate alleged violations of disability law is also available in the Office for Equal Opportunity.

Appendix E Cooperative Education

I. Introduction

The Cooperative Education experience is offered through the Career Services department in conjunction with academic departments. The Cooperative Education Program is an educational plan designed to integrate classroom study with planned, supervised, and evaluated employment experience linking academic programs with students' career goals and interests. It offers undergraduate and graduate students a unique opportunity to combine career, social and personal growth with the educational process.

Cooperative Education has a profound effect on the way learning takes place because it is interactive and reinforcing. Academic studies and field experiences connect to produce an overall learning environment that gives relevance to students' educational programs and direction to their career development. Students ascribe new value to what is learned in the classroom because, either in principle or practice, they are applying it to the test of a real job. The added ingredient for learning is experience.

II. Qualifying Parameters for Student Participation

The following are the University's minimum requirements (departments may have additional requirements) for student participation:

- The student is enrolled and pursuing a degree at Central Washington University.
- The student is in good academic standing.

C. The field experience is directly related to the student's major field of study and/or career goal.

D. The student has completed the appropriate prerequisite courses and possesses the skills and knowledge required for placement in a suitable level of field experience as determined by the student's department.

E. The student must have a department faculty cooperative education (co-op) advisor for enrollment in a Cooperative Education course.

F. The student's field experience is a practical position where the student is actively engaged in hands-on learning, not just observing.

III. Program Enrollment

A. Register on the Career Services website at www.cwu.edu/~career. Prior to registration, call or visit Career Services in Barge 204 to initiate registration.

B. Students must complete a formal learning agreement with a learning plan that contains relevant objectives and activities. The agreement form constitutes a field study plan that includes a description of academic requirements such as term paper/project(s), assigned readings, research project/thesis, progress reports, final report, etc. The Learning Agreement must be endorsed by the employer/supervisor, the student, the faculty co-op advisor, department chair, and the Associate Director of Cooperative Education.

C. The student must submit a completed Cooperative Education Learning Agreement form to Career Services to complete the registration process for enrollment in the Cooperative Education course.

D. Cooperative Education courses are numbered 290, 490, and 590. Credits are variable 1-5 for 290, 1-12 for 490, and 1-8 for 590 level courses.

E. A freshman should complete at least 45 credits at CWU prior to enrolling in the Cooperative Education course. A transfer student should complete at least 15 credits at CWU and have a total of 45 credits, including transfer credits, prior to enrolling in the Cooperative Education course.

F. The student should complete a minimum of 90 credit hours with 10 or more credits in his/her major to be eligible for enrollment in the 490 level course. Departments may have additional requirements for this level of experience.

G. A student who desires a career exploration experience, or who has not declared a major, is limited to enrolling

for the Cooperative Education course at the 290 level.

- H. The student may reenroll for the Cooperative Education course, but, in no case will a student be allowed to count more than 10 credits at the 290 level nor more than 20 total credits toward graduation requirements. No more than 10 credits are accepted in transfer. No more than 8 credits may be applied to a graduate degree.
- I. Cooperative Education courses may be repeated if field experience learning objectives and activities are distinctly different from previous work or field experience.

IV. Awarding of Credits

- A. Cooperative Education credits are to be awarded on the basis of quality, magnitude, and the level of learning (learning plan, relevant objective and activities) that take place during the field experience.
- B. For University standardization practice, credits are awarded using a minimum of 40 or more clock hours of approved field experience for each credit hour earned. Clock hours will include time spent to complete the work phase and the academic phase (term paper/project(s), journal or log, progress reports, assigned readings, final report, etc.) of the field experience.
- C. An appropriate means for evaluation (progress reports, performance evaluations, final report, etc.) of the learning is established between the student, the employer, and the faculty co-op advisor.
- D. The student will be awarded an S/U grade (letter grade optional with approval of faculty co-op advisor) for the Cooperative Education course.
- E. If the field experience is terminated by the employer or academic department, the student will not receive credit.
- F. Credit will not be given for previous field or work-study experience.
- G. Credit for the Cooperative Education course will be awarded for the quarter in which the majority of hours for the experience were acquired. (This is applicable for co-op experiences that carry into multiple quarters.)
- H. If the student leaves the field experience prior to completion of the hours, objectives, and/or academic requirements, no credit will be received and a grade of Incomplete or Unsatisfactory will be awarded. Grading and award of credit is based solely on completion of the agreed-upon parameters (hours, objectives, academic requirements) set forth in the Learning Agreement.

V. Student Supervision and Coordination

- A. Daily supervision of the student is to be provided by the cooperating company/agency work supervisor who will be identified prior to the field experience.
- B. Cooperative Education courses shall be under the direct guidance, direction, and coordination of a faculty co-op advisor as part of the regular teaching load. Credit for faculty load shall comply with faculty code, Part 4, Section 7.20, B, 1, a, (3) of the current (1992) code. The faculty co-op advisor is available to the student in the field. The faculty advisor arranges and coordinates visitations/contacts with the employer/supervisor and the student a minimum of twice each quarter. The faculty co-op advisor keeps a file on each student's work (term paper/project(s), final report, etc.) with his/her department office.
- C. The Career Services office is an academic support service which facilitates the advising of students in the placement and cooperative education process; the development and sharing of employment information to students among departments; marketing the program; maintaining program direction, sustaining quality control for the program; conducting program research, assessment, and evaluation; and providing training and development opportunities for faculty co-op advisors and staff.
- D. The Career Services office staff is available for field visitations/contacts when suitable faculty representation is not available or upon request of the faculty co-op advisor or department chair.

VI. Student Placement Process

- A. The placement process is intended to be a real-life job seeking experience for the student, including competition for positions.
- B. The Career Services office advises students in the placement process through the maintenance of past internship placements and current listings that are submitted by employers. In addition, the staff is available to provide assistance with resumes, cover letters, job search techniques, and interviewing tips.
- C. The student should check with their faculty advisor for internship leads as many departments have developed their own internship connections.

- D. Students may propose their own placement site to the Faculty Co-op Advisor who determines the suitability of the placement with a given employer for Cooperative Education credit.
- E. Students may find a "regular" position that can double as a co-op experience if there is sufficient challenge and opportunity for learning that can justify university credit. Some students work with their current employer to offer new assignments or responsibilities that could qualify as a co-op experience. Decisions on whether the experience warrants university credit rest with the academic department and the coordinating faculty.
- F. The placement must conform to affirmative action and EEO/Title IX/ADA guidelines.

VII. Position Description for Field Experience

The cooperating employer/agency must agree to provide a written description of field experience tasks, identify a field supervisor and submit his/her qualifications to the appropriate university department and the Office of Cooperative Education prior to approval of the Learning Agreement.

VIII. Student Compensation

- A. Paid field experience positions are sought where possible and practicable.
- B. Unpaid positions may be used but are limited to the equivalent of working full-time for one quarter (approximately 400 hours).
- C. Students should not be put in a position where they are exploited as a source of cheap labor, replace or are in direct competition with regular employees.
- D. Participation in Cooperative Education unpaid experiences should not become an undue financial burden for the student or be the cause of the student withdrawing from the University for financial reasons.

IX. Program Evaluation

- A. Paid field experience positions are sought where possible and practical.
- B. Unpaid positions may be used but are limited to the equivalent of working a full-time quarter.
- C. Students should not be placed in a position where they are exploited as a source of cheap labor, replace or are in direct competition with regular employees.

- D. Participation in Cooperative Education unpaid experiences should not become an undue financial burden for the student or be the cause of the student withdrawing from the University for financial reasons.
- E. Health, accident, and disability insurance are the responsibility of the student, and if not provided by the employing agency, should be purchased individually.
- F. Central Washington University is not responsible for liability or malpractice insurance for individual students. If such coverage is desired but is not provided by the co-op agency, students may wish to arrange individual coverage.
- G. Students receiving financial aid must check with the Financial Aid Office prior to accepting a paid placement. A paid placement could impact the financial aid entitlement the following year. Students receiving financial aid must be sure their academic responsibilities for their co-op experience are completed by the end of the registered quarter. Any student with an "Incomplete" grade at the time of financial awards for the next quarter jeopardizes their position to receive their financial aid.
- H. If the student is receiving financial aid, Federal Law requires that any income be declared. If the student is employed and completes a W-4 form, this reporting will occur through regular employment withholding and a W-2 form at tax time. If the student does not complete a W-4 form for the employer, they must declare their income with the Financial Aid Office through a specific form that is available from the Financial Aid Office.

Appendix F

Drug and Alcohol Policy

(Complete policy available in the office of the Vice President for Student Affairs)

I. Policies and Procedures

The purpose of this section is to briefly summarize the key points of the University policy regarding the distribution, possession, and use of alcohol and other drugs. In order to comply with the requirements of the Drug-Free Schools and Communities Act and the Drug-Free Workplace Act, a complete description of relevant laws, procedures, sanctions, and prevention information is provided in the Addenda that follow this summary.

A. Legal Issues.

The University's policy regarding the possession and consumption of alcohol

and other drugs on campus has been developed in keeping with Washington State law and the Governor's policy on alcoholism and drug dependency. Washington State laws are described in the *Revised Code of Washington* and the *Washington Administrative Code*. Members of the University community may review these documents at the University library. For example, state laws regulate behavior such as the consumption of alcohol in public places, the furnishing of liquor to minors, the illegal purchase of alcohol, and the distribution of controlled substances, to name a few. A brief description of applicable local, state, and federal laws is provided in Addendum A. The University Policy assumes that individuals of the University community have read, understood, and agree to abide by these local, state, and federal laws.

B. Proscribed Student Conduct.

According to the Washington Administrative Code (WAC 106-12 027), a student shall be subject to disciplinary action or sanction upon violation of any of the following conduct proscriptions:

- (14) Possession, use, or distribution on campus of any controlled substance as defined by the laws of the United States or the state of Washington except as expressly permitted by law.
- (15) Violation of the university policy on alcoholic beverages which states:
 - a. Persons twenty-one years of age or older may possess and/or consume alcoholic beverages within the privacy of their residence hall rooms or apartments. Washington State law provides severe penalties for the possession or consumption of alcoholic beverages by persons under twenty-one years of age and for persons who furnish alcoholic beverages to minors. All University students should be aware of these laws and the possible consequences of violations.
 - b. The University does not condone the consumption of alcoholic beverages by minors at functions sponsored by Central Washington University organizations. Organizations are held responsible for the conduct of their members at functions sponsored by the organization and for failure to comply with the Washington state law.
 - c. The campus judicial council may place on probation any organization or prohibit a specific campus social function when the consumption of alcoholic beverages

has become a problem of concern to the University.

- (16) Violation of clearly stated proscriptions in any published rule or regulation promulgated by any official campus committee or commission or council acting within the scope of its authority.
- (17) Violation on campus of any state or federal law or violation of any state or federal law off campus while participating in any University-sponsored activity.

C. Proscribed Employee Conduct.

As a condition of employment at the University, all employees will abide by the terms of the Drug Free Workplace Act of 1988 which prohibits the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the university workplace. This Act also requires that employees notify their supervisor of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after the conviction.

In addition, University employees (i.e., faculty, staff, administrators, and student staff) are obligated to work effectively and cooperatively in their positions. Responsibility to improve substandard performance or to correct unacceptable work behavior rests with the individual employee, regardless of the underlying causative factors or circumstances that may be present. While alcoholism and/or other drug dependencies may be among the factors contributing to an employee's job performance problems, it remains the responsibility of the individual employee to seek appropriate treatment. Failure to correct unsatisfactory job performance or behavior, for whatever reason, will result in appropriate disciplinary action, ranging from verbal/written reprimand to termination of employment.

University employees are expected to be familiar with the University policies or codes that pertain to their employment on campus. Policies concerning the behavior of employees are contained in one or more of the following sources: The Exempt Employees Code of Personnel Policies and Procedures, the Faculty Code of Personnel Policies and Procedures, and the Higher Education Personnel Board Rule. Faculty members should be aware that the Drug and Alcohol Policy is an official University policy; as such, violations of this policy are subject to the sanctions described in Sections 10.20 and 10.25 of the Faculty

Code. Sanctions for the willful violation by civil service employees of published institutional regulations are included in HEPB WAC 251-11-030. Administrative exempt personnel are referred to Section 3.04 of the Exempt Employees Code for sanctions resulting from the willful violation of published institutional guidelines.

D. Problem Solving Committee/Student Assistance Program.

In order to promote the health and well-being of our student population, the University employs a student assistance program when dealing with student alcohol and other drug abuse problems. Any student may take advantage of the services through self-referral or referral by other students, staff, or faculty. The services can aid in assessing the seriousness of a substance abuse/behavioral problem, identify healthy alternatives for dealing with a problem, and make referrals to the appropriate services and/or treatment programs. The committee also coordinates case management and follow-up services for those in recovery and/or recently completing substance abuse treatment.

For a complete description of resources please see Addenda C and D.

E. Employee Advisory Services (509 482-2686).

Alcoholism and drug dependency are defined as illness that interfere with an employee's ability to perform assigned work satisfactorily or that adversely affect job behavior. Employees are encouraged to voluntarily seek expert assistance for alcoholism, drug dependency, or any other job-impairing personal problem. Assistance is available through a variety of professional resources on campus and in the community. Questions regarding medical insurance coverage for professional services should be referred to the employee's medical plan provider.

Supervisors are required to identify, document, and attempt to correct all employee job performance and/or work behavior problems, using standard corrective action procedures outlined in either personnel policies or the Faculty and Administrative Exempt Codes. They should not diagnose alcoholism, drug dependency, or any other complex medical-behavioral problem. However, corrective effects may include referral to professional treatment resources at any time during the process. Supervisors are

encouraged to share information regarding professional treatment services with the employees on a regular basis. Pamphlets describing available services are available from the CWU department of personnel services or from the Wellness Coordinator. See Addendum D for a description of professional drug treatment and counseling resources.

F. Serving Alcoholic Beverages on Campus.

University departments and student organizations are encouraged not to involve alcoholic beverages in any sponsored function. If they choose to do so, they are urged to consider the effects and the responsibility they assume in making such decisions. If the members of the department or organization choose to include alcoholic beverages in their functions, they must comply with all local and state laws, as well as specified liquor guidelines.

All groups and organizations sponsoring social events held on the CWU campus and all recognized University groups holding events off campus which involve the serving and consumption of alcoholic beverages are obliged to comply with the procedures and guidelines outlined in Addendum E.

G. Advertisement.

There will be no marketing or advertising of alcoholic beverages on the Central Washington University campus, except as allowed by state law. The University name will not be associated with the advertising of alcoholic beverages.

H. Policy Implementation and Application.

This policy applies to all members of the Central Washington University community at all events sponsored by the University and/or held in any University facility. It is expected that the University policy regarding alcohol and other drugs will be applied in a consistent manner.

ADDENDUM A

Applicable Local, State, and Federal Laws
Provided below is a brief description of local, state, and federal laws that apply to alcohol and other drugs. This is not intended as a direct quotation of the RCW or other laws. Further information about local, state, and federal laws can be found in the CWU Library.

The City of Ellensburg Chapter 7.40

Drugs and Intoxicating Liquor

- 7.40.04 Liquor is not allowed in public places; this includes all property owned by the City of Ellensburg to include parks.
- 7.40.08 It is illegal to sell liquor to any person that appears to be under the influence of liquor.
- 7.40.12 No person shall give or supply liquor to a minor.
- 7.40.13 Sale of tobacco products to minors (under 18 years of age) is not permitted, signs shall be posted stating the same.
- 7.40.14 It is unlawful to possess Marihuana, any part of the plant, its seeds or resin.
- 7.40.1 It shall be a gross Misdemeanor to be in possession of drug paraphernalia.
- 7.40.20 Purchase or consumption of liquor by a minor is unlawful.
- 7.40.22 It is unlawful for a minor to frequent taverns, cocktail lounges or other establishments dispensing intoxicating liquor.
- 7.40.26 It is unlawful to leave children in a parked automobile while in a tavern.

Chapter 8.2

The city of Ellensburg has adopted by reference Chapter 46.90 RCW relating to the "Washington Model Traffic Ordinance."

Kittitas County Alcohol and Drug Abuse Policy

- 10.32.030 (3) It is unlawful to operate any snowmobile while under the influence of alcohol or other drugs.
- 10.37.040 It is unlawful for any person to operate any nonhighway vehicle while under the influence of alcohol or other drugs.

Chapter 9.12

- 9.12.030 (f) It is unlawful for any person to operate any vessel or manipulate any water skis, surfboards or similar device while under the influence of intoxicating liquor or narcotic or habit-forming drugs.

Washington State Law (Revised Code of Washington)

- 69.41.030 It shall be unlawful for any person to sell, deliver, or possess any legend drug except upon the order or prescription of a physician.
- 69.41.040 A prescription, in order to be

- effective in legalizing the possession of a legend drug, must be issued for a legitimate medical purpose by one authorized to prescribe the use of such drugs.
- 69.41.340 Student athletes found using steroids will lose their eligibility to participate in school-sponsored athletic events.
- 69.50.401 It is unlawful for any person to manufacture, deliver, or possess with intent to manufacture or deliver a controlled substance. Penalties for this law are based on the quantity and the schedule of the drug involved similar to the federal law.
- 69.50.403 It is unlawful to falsify any information related to drug manufacturing or distribution or to attempt to obtain a controlled substance by fraud, deceit, misrepresentation, or subterfuge or by forgery or alteration of a prescription.
- 69.50.406 Distribution to persons under age eighteen is punishable by a fine and imprisonment of up to twice the authorized amount.
- 69.50.408 Second or subsequent offenses may be fined and imprisoned for twice the normal amount allowed by law.
- 69.50.410 It is unlawful for any person to sell for profit any controlled substance or counterfeit substance classified in the schedule of drugs.
- 69.50.412 It is unlawful for any person to use paraphernalia to plant, propagate, cultivate, grow, harvest, manufacture, compound, convert, produce, process, prepare, test, analyze, pack, repack, store, contain, conceal, inject, ingest, inhale, or otherwise introduce into the body a controlled substance. This is a misdemeanor. It is unlawful for any person to deliver, possess with the intent to deliver or manufacture with the intent to deliver drug paraphernalia.
- 69.50.415 Any person that delivers a controlled substance to a person that results in the death of that person is guilty of a controlled substance homicide, a class B felony.
- 69.50.435 Violations of the various state laws that are committed on a school bus or in the near vicinity of school grounds are punishable at twice the normal allowed fine or imprisonment.
- 69.50.505 The following are subject to seizure and forfeiture if involved in the dealing of drugs and no property rights exist in them: all controlled substances, all raw material used in manufacturing, all property used as a container, all conveyances autos, boats, airplanes, use to transport drugs, all books and records, all drug paraphernalia, all moneys, all real property.
- 69.50.509 If upon the sworn complaint of any person, it shall be made to appear to any judge that there is probable cause related to drug dealing the judge shall, with or without the approval of the prosecuting attorneys, issue a warrant for search and seizure of controlled substances.
- 69.52.030 It is unlawful for any person to manufacture, distribute, or possess with intent to distribute, an imitation controlled substance.
- 69.52.040 Imitation controlled substances shall be subject to seizure, forfeiture, and disposition in the same manner as are controlled substances.
- 66.44.100 No person shall open the package containing liquor or consume liquor in a public place.
- 66.44.130 Every person who sells by the drink or bottle any liquor shall be guilty of violation of this title (exceptions as permitted by law).
- 66.44.170 It is illegal to possess liquor with the intent to sell with out proper license.
- 66.44.200 No person shall sell any liquor to any person apparently under the influence on liquor.
- 66.44.250 It is unlawful to drink on a public conveyance, i.e., bus or train except as permitted by law.
- 66.44.270 It is unlawful to sell or give liquor to a minor, any person under the age of twenty-one. It is unlawful for any person under the age of twenty-one years to possess, consume, or otherwise acquire any liquor.
- 66.44.280 It is unlawful for a minor to attempt to apply for a permit.
- 66.44.290 It is unlawful for a minor to attempt to buy liquor.
- 66.44.291 Every person that is guilty of a violation of RCW 66.44.290 is guilty of a misdemeanor and will be punished according to the law and fined a minimum of two hundred fifty dollars and will do twenty-five hours of community service.
- 66.44.300 It is unlawful for a person to invite a minor into a public place where liquor is being served.
- 66.44.310 It is unlawful to misrepresent your age to gain access to a liquor serving establishment.
- 66.44.325 It is unlawful to transfer to a minor an identification of age for the purpose of permitting such minor to obtain alcoholic beverages.
- 66.44.328 No person may forge, alter counterfeit, or otherwise prepare or acquire and supply to a person under the age of twenty-one years a facsimile of any of the officially issued cards of identification.
- 46.61.502 It is unlawful to drive while under the influence of intoxicating liquor or drugs.
- 46.61.504 It is unlawful to be in physical control of a motor vehicle while under the influence of intoxicating liquor or drugs.
- 46.61.519 It is a traffic infraction to drink beverage alcohol or have an open receptacle of an alcoholic beverage in a motor vehicle while on the state highways.
- 46.61.5195 It is unlawful to disguise an alcoholic beverage in an other container.
- 46.61.520 If a person dies from a related injury within three years after an accident involving alcohol the person that caused the damage can be charged with vehicular homicide.

ADDENDUM B

University Sanctions for Violations of Proscribed Student Conduct

Official University action will be taken when violation of state law or University policy regarding alcohol and other illicit drugs occur. Repeated violations carry more significant consequences. The vice president's office may include in the sanction mandated contact with the prevention coordinator and/or direct referral for assessment through the Alcohol Drug Dependency Service (ADDS) in Kittitas County. If alcohol or other drug abuse is a related factor in the violation of other proscribed conduct the same mandate may be considered appropriate.

Following are the sanctions available as they appear in the CWU Student Judicial Code:

1. **Warning.** Notice in writing that the student has violated University rules or regulations or has otherwise failed to meet the University's standard of conduct. Such warning will contain the statement that continuation or repetition of the specific conduct involved or other misconduct will normally result in one of the more serious disciplinary actions described below.
2. **Disciplinary Probation.** Formal action specifying the conditions under which a student may continue to be a student at the University including limitation of specified activities, movement, or presence on the CWU campus. The conditions specified may be in effect for a period of time or for the duration of the student's attendance at the University.
3. **Restitution.** An individual may be required to make restitution for damage or loss to University or other property and for injury to persons. Failure to make restitution will result in suspension for an indefinite period of time as set forth in subsection (4) below provided that a student may be reinstated upon payment.
4. **Suspension.** Dismissal from the University and from status as a student

for a stated period. The notice suspending the student will state in writing the term of the suspension and any condition(s) that must be met before readmission is granted. The student so suspended must demonstrate that the conditions for readmission have been met. There is to be no refund of fees for the quarter in which the action is taken, but fees paid in advance for a subsequent quarter are to be refunded.

5. **Deferred Suspension.** Notice of suspension from the University with the provision that the student may remain enrolled contingent on meeting a specified condition. Not meeting the contingency shall immediately invoke the suspension for the period of time and under the conditions originally imposed.
6. **Expulsion.** The surrender of all rights and privileges of membership in the University community and exclusion from the campus without any possibility for return.

(NOTE: These sanctional are being reviewed for possible changes.)

The vice president's office may invoke a *Summary Suspension* of any student from the University pending investigation, action or prosecution of charges of an alleged violation of proscribed conduct when there is reason to believe that their physical or emotional safety and well-being or the safety and well-being of other University community members, or the protection of property requires such suspension.

When chronic alcohol or other drug use is involved, as is often the case when a student has been suspended or suspension is imminent, re-entry after a period of suspension or continuation in school on a deferred suspension may be contingent upon the student successfully completing an appropriate treatment program. The specific treatment would be recommended by the coordinator of the Wellness Program and/or by members of the staff of local substance abuse treatment agencies. Generally, documentation from treatment counselors or program directors confirming successful completion of treatment and a positive prognosis for recovery are required for reinstatement or continuation in school.

ADDENDUM C

Problem-Solving Committee

When student behavioral problems occur, the University may employ a team problem-solving approach. The chief of campus police joins the student affairs team weekly to review residence living incident reports filed by living group advisors (LGAs) and managers, as well as campus police reports which cover both on- and off-campus students. This problem-solving team then deals with student behavioral problems generally violative of the conduct proscriptions contained with the CWU student judicial code (WAC 106-120). It has been found that alcohol and other drug abuse is involved in the majority of student behavioral problems. The problem-solving team works together to suggest intervention strategies which are considered to be the most appropriate and effective for eliminating specific negative student behaviors, especially those related to violence and substance abuse. The team may suggest one of the following forms of intervention: (1) a meeting with members of the residence living student staff; (2) a meeting with one of the residence living or housing administrative staff; or (3) a meeting with the Wellness Coordinator or other appropriate staff members.

Official hearings in the vice president's office are conducted when it becomes apparent to the problem-solving team that the initial and more informal forms of intervention with a student have been unsuccessful in positively modifying a student's behavior.

ADDENDUM D

Campus and Community Resources On Campus

Wellness Center 963-3213

Located in suites 111-113, the Wildcat Wellness Center provides confidential services to students staff and faculty at Central Washington University regarding any issue that is related to alcohol and other drugs. The services include: informal assessment, referral, intervention, aftercare, information and education.

Sexual Assault Response Coordinator: This service is provided by the Director of the Wellness Center. Students may call 963-3214 and leave a confidential message and/or drop by the Wellness Center at 111-113 Sue Lombard Hall. Services include confidential counseling, referral, advocacy, information and crisis response for victims, survivors and significant others.

The Students for an Assault Free Environment (SAFE) peer education program is sponsored by the Wellness Center and advised by the Wellness Center's Health Educator. They can be reached by phoning 963-3213.

Student Health and Counseling Center 963-1391

Provides counseling services to all students attending Central Washington University. Services include private confidential one-on-one counseling and some special-interest group counseling services. You must be a student of Central Washington University. Services are funded by student fees.

Community Psychological Services Center 963-2501

Services are provided by graduate students under the supervision of a professor working in the graduate counseling studies area. Services include one-on-one counseling sessions. Some group sessions are available depending on need and students to provide the service. There is no charge for services.

Off Campus

Alcohol Drug Dependency Services (ADDS) 925-9821

ADDS provides state mandated services to the Kittitas County population. These services include: family and individual counseling, living skills counseling, intensive outpatient treatment, substance abuse issues training, alcohol/drug information school alcohol/drug evaluation, full-screen urinalysis, 24-hour crisis intervention service, DWI assessments, deferred prosecution services, pre-employment drug screening, anger management counseling, parenting skills training and employee assistance services. Fees are based on a sliding fee scale.

Central Washington Comprehensive Mental Health 925-9861

CWCMH provides a variety of services from its office in Ellensburg and out of its Yakima office. CWCMH offers individual and group therapy for adults who are dependent on chemical substances. The only methadone detoxification and maintenance program offered in Central Washington is located at the Yakima Center and assists individuals addicted to opiate drugs. Fees are based on a sliding fee scale.

Kittitas Valley Recovery Services 925-7227

KVRS offers alcohol/drug assessments, DWI/deferred prosecution assessments, outpatient counseling services, co-dependency counseling along with most other services associated with chemical dependency, to include individual, family and group counseling. Fees are based on a sliding fee scale.

Washington State Employee Advisory Service (509) 456-5000

EAS is a State of Washington program that offers help to any state employee or family member who has a personal problem that may or does impact their job performance. EAS does not attempt to treat or solve all

problems; its services consist of brief counseling to help clarify your problems and develop a practical plan for solving them. There is no fee associated with the EAS; referral to other agencies for support may require a fee.

**Alcoholics Anonymous
(Alano Club 925-2494)**

A.A. is a voluntary, worldwide fellowship of men and women from all walks of life who meet together to attain and maintain sobriety. The only requirement for membership is a desire to stop drinking. There are no dues or fees for A.A. membership.

**Crisis Line - Lower County 925-4168
Upper County 674-2881**

A 24-hour referral service for the residence of Kittitas County. Crisis Line is manned by volunteers that stay up to date on the services and agencies that may assist a person with any number of problems.

ADDENDUM E

**Procedures for Serving
Alcoholic Beverages on Campus**

The following procedures must be followed by any party that intends to serve alcoholic beverages on campus:

1. All events will be staffed by one or more certified Social Attendant(s) who has completed the required training course provided by the Washington State Liquor Control Board. The number of Social Attendants for a given event will be determined and subsequently hired through the University Substance Abuse Prevention Program.

2. If alcoholic beverages are to be served at a social event, the sponsoring university group is required to provide nonalcoholic beverages as well. The variety of alcoholic and nonalcoholic beverages available to be served shall be equal. In addition, the sponsoring group is encouraged to also provide food at the social event, in keeping with the intent of a banquet permit. Provision for serving such nonalcoholic beverages must be outlined on the University permit.
3. Personal identification will be checked to verify age and to prevent minors from consuming alcoholic beverages; identification will include a picture of the individual. Individuals whose age cannot be verified by identification provided to the Social Attendant will not be served beverages containing alcohol. Acceptance or rejection of identification is within the discretion of the Social Attendant.
4. If it is determined by the Social Attendant that an individual has consumed too much alcohol, she/he will no longer be served beverages containing alcohol.
5. If an individual becomes verbally and/or physically abusive, the Social Attendant will do any or all of the following:
 - a. Inform the coordinator of the event of the problem behavior;
 - b. Call the Student Union Building Night Manager;
 - c. Call Campus Security.
6. After the event, a written report will be completed by the Social Attendant

which will describe any problems, concerns, or suggestions that pertain to the event. The report will be kept on file and reviewed if and when the sponsoring organization subsequently requests University space for social functions involving alcohol consumption. Documentation of problems or violations at previous social events may result in the group not being allowed an alcohol use permit in the future. In addition, any areas of concern will be provided, in writing, to the sponsoring organization after the event. A copy of this and any subsequent communication will be kept on file in the University Substance Abuse Prevention Program Office.

7. Sponsoring organizations should be aware of the consequences of failure to comply with the policy regarding the serving and consumption of alcoholic beverages. The individuals responsible for the event will be held accountable under all Washington State laws. Other possible consequences include, but are not limited to:
 - a. Sponsoring clubs and organizations may lose recognition as official university clubs and organizations.
 - b. Visiting groups may not be allowed to use University facilities in the future.
 - c. Other University groups may not be issued alcohol use permits in the future.

ADDENDUM F

**Central Washington University
Student Sexual Assault Response Policy**

Central Washington University affirms respect, responsibility, and caring among all persons within the community. Central Washington University will not tolerate sexual assault or sexual misconduct in any form. The university is committed to preventing all forms of sexual assault, and to providing accessible, responsive services for dealing with such offenses. Sexual assault on the part of any student is clearly inconsistent with Central Washington University values, and is considered a form of sexual harassment in violation of the university Student Rights and Responsibilities Policy, as well as a violation of state and federal law. Federal law requires specific policy and procedures to address sexually assaultive behavior on the part of students. Allegations of sexual assault by students should be addressed through this policy, administered by the office of the Vice President for Student Affairs and Enrollment Management.

(Complete policy available in the office of the Vice President for Student Affairs and Enrollment Management.)



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